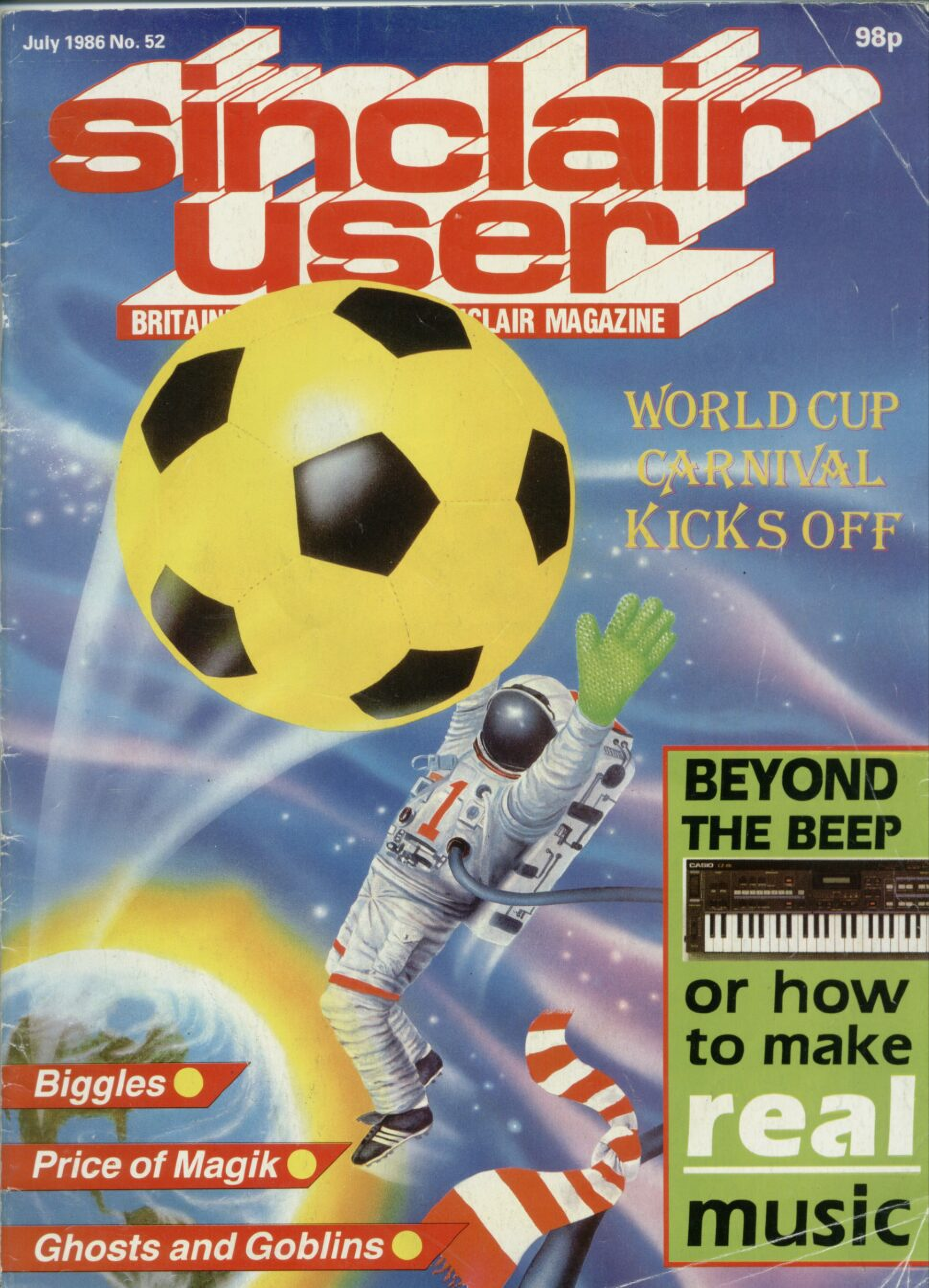
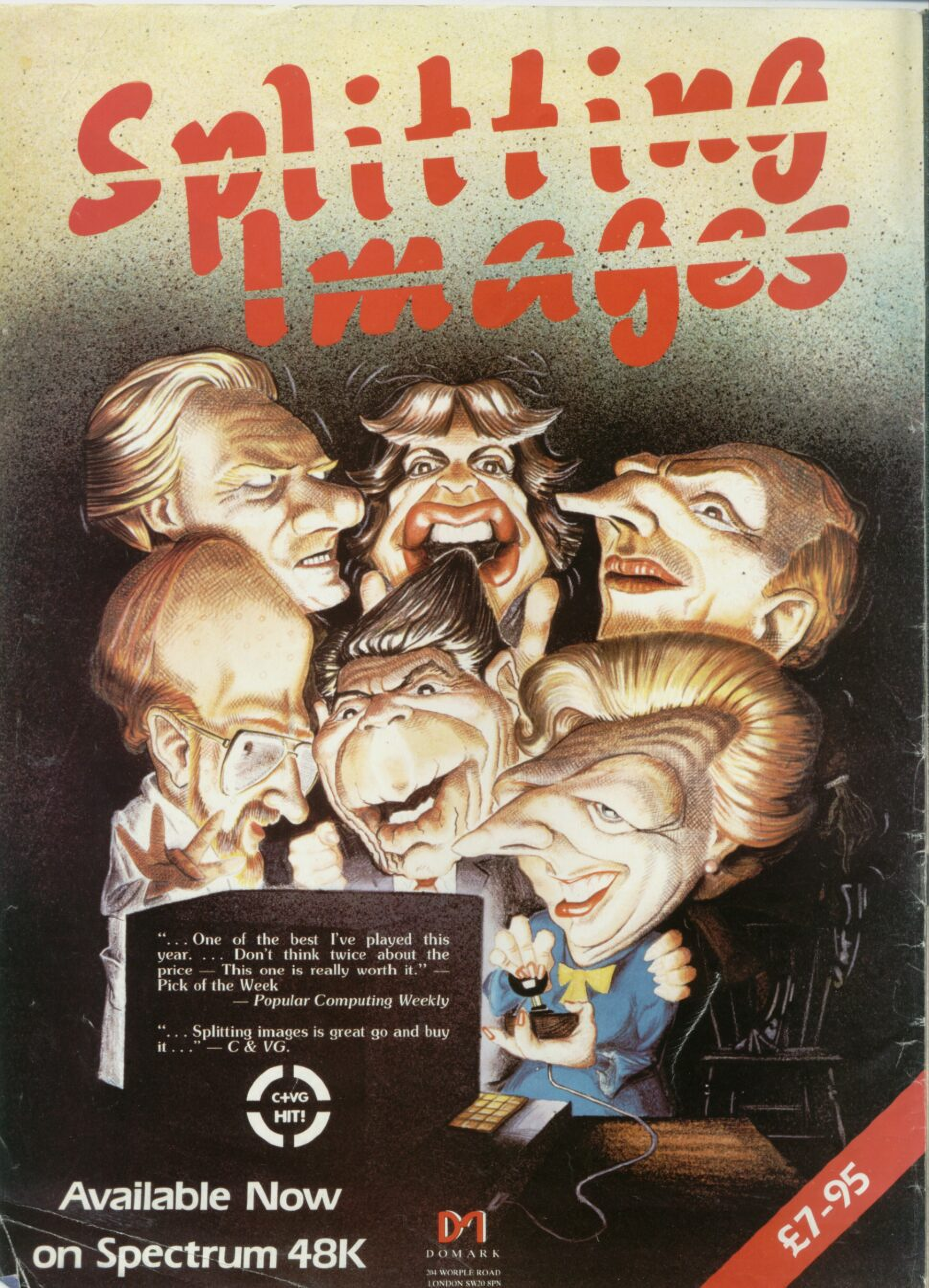


July 1986 No. 52
98p
sinclair user
BRITAI
CLAIR MAGAZINE
WORLD CUP CARNIVAL KICKS OFF
BEYOND THE BEEP
CASIO
or how to make real music
Biggles
Price of Magik
Ghosts and Goblins


Splitting Images
"... One of the best I've played this year. ... Don't think twice about the price — This one is really worth it." — Pick of the Week — *Popular Computing Weekly*
"... Splitting images is great go and buy it ..." — *C & VG*.
C+VG HIT!
Available Now on Spectrum 48K
DOMARK
204 WORPLE ROAD LONDON SW20 8PN
£7-95

C · O · N · T ·

sinclair user

Editor
David Kelly
Deputy editor
John Gilbert
Senior staff writer
Graham Taylor
Staff writer
Clare Edgeley
Designer
Gareth Jones
Editorial secretary
Norisah Fenn
Adventure writers
Richard Price
Gordo Greatbelly
Helpline
Andrew Hewson
Hardware correspondent
John Lambert
Business correspondent
Mike Wright
Contributors
Jerry Muir
Gary Rook
Chris Bourne
Brian Cooper
Advertisement manager
Louise Fanthorpe
Senior sales executive
Rory Doyle
Production assistant
Alison Morton
Advertisement secretary
Linda Everest
Subscriptions manager
Carl Dunne
Publisher
Terry Pratt
Telephone
01-251-6222
Sinclair User is published monthly by EMAP Business & Computer Publications
Cover illustration
Stuart Hughes

If you would like to contribute to Sinclair User please send programs or articles to:
Sinclair User
EMAP Business & Computer Publications
Priory Court
30-32 Farringdon Lane
London EC1R 3AU

Original programs should be on cassette and articles should be typed. Please write Program Printout on the envelopes of all cassettes submitted. We cannot undertake to return cassettes unless an SAE is enclosed. We pay £20 for each program printed and £50 for star programs.

Typeset by Saffron Graphics Ltd, London EC1.
Printed by Peterboro' Web, Woodston, Peterborough.
Distributed by EMAP Publications Ltd.

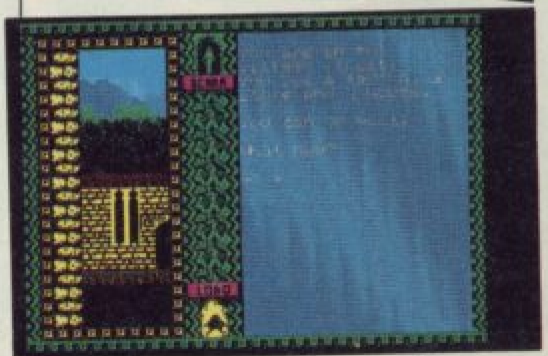
ISSN No 0262-5458

ABC 90,215 July-Dec 1986

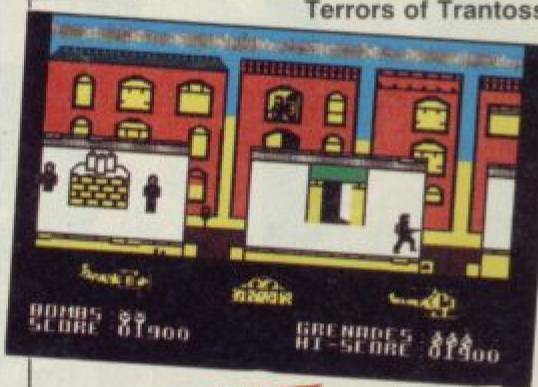
SINCLAIR USER CLASSIC



Ghosts 'n' Goblins



Terrors of Trantoss



Biggles

SINCLAIR USER CLASSIC



Spindizzy

SOFTWARE



· E · N · T · S

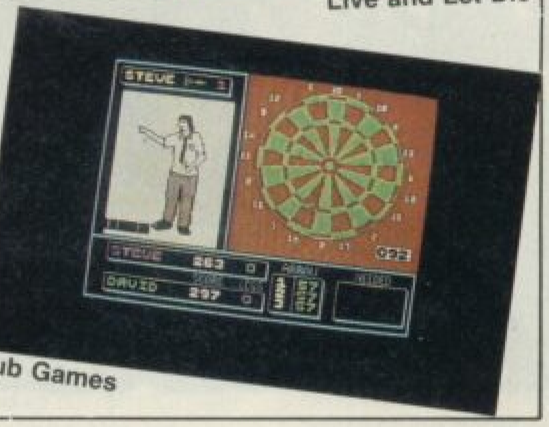
PREVIEW!



Molecule Man



Live and Let Die



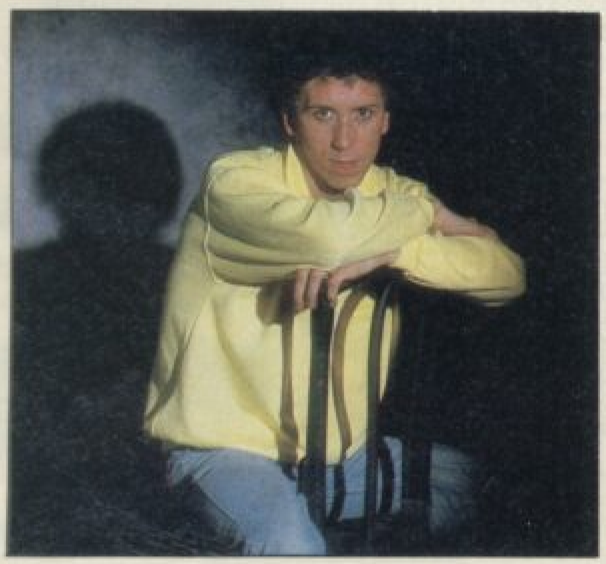
Pub Games

FEATURES



HARDWARE

PRINTOUT

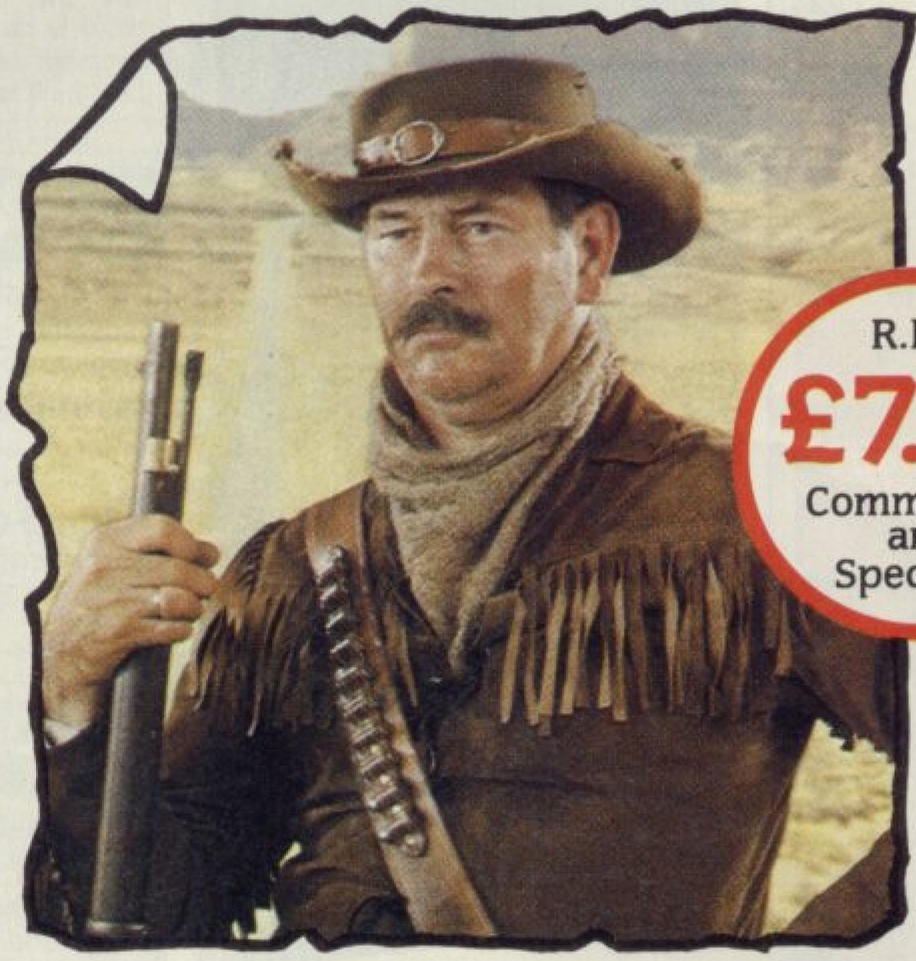


COMPETITIONS



REGULARS

CLIFF HANGER



R.R.P
£7.95
Commodore and Spectrum

New Generation Software

WIN THE WEST...THE WILD WAY

Join the now famous **CLIFF HANGER** in pursuit of that sharp-shootin' varmint. This multi-screened arcade game is available for the Commodore 64 and NOW for the Spectrum 48/128

Name ....

Address ....

....

Spectrum 48/128 Cassette ☐ Commodore 64 Cassette ☐

Both versions of Cliff Hanger cost £7.95. Please make cheques and postal orders to Virgin Games Limited and post to the address below. Please do not post money.

Virgin Games Ltd, 2/4 Vernon Yard, 119 Portobello Road, London W11 2DX

Spectrum Plus Two launch set for PCW

PRODUCTION of the first 'Amstrad' Spectrum — to be called the Spectrum Plus Two — is now well under way and retail chains are already beginning to 'dump' their existing Spectrum Plus and Spectrum 128 stocks.

The machine will be launched in the Autumn — probably at the Personal Computer World Show in September. It will be priced at around £139 and look very similar to the existing Spectrum Plus, yet with built-in cassette player. Technically the new machine is a re-housed Spectrum 128 — possibly with memory up-graded to 256K. Amstrad's chairman Alan Sugar has confirmed, as expected, that the Plus 2 will not include a monitor because of conflict with Amstrad's own-branded CPC 464 and CPC 6128 Z80-based models.

Manufacture of the Plus Two has apparently already begun at the South Korean plant where the other Amstrad machines are built and Amstrad has reached agreement with Timex in Dundee to build the Spectrum Plus Two in the UK.

The Timex deal, according to Amstrad's group operations director Jim Rice, involves the assembly of at least 100,000 of the new micros and the manufacture of a new dot matrix printer to be 'badged' for the Plus Two. The new printer is expected to be a development of the model supplied with Amstrad's 8256 and 8512 word processors.

This work is likely to provide around 200 jobs at Dundee.

Following the announcement of the Timex manufacturing deal retail chains — including WH Smith and Dixons — have started to off-load their existing Spectrum Plus and 128 stocks with a series of price cuts and special packages which include joysticks, free software and printers.

Deals within different branches will differ but, for instance, WH Smith is selling the 128 for £139.99 and the Spectrum Plus with CCR 700 data recorder, four US Gold tapes and a holiday voucher, for just £129.00.

Dixons is selling the 128 for £139.95 together with its two free programs. The Spectrum Plus, however, is now £119.95 with data recorder, joystick and ten free programs.

Micronet now open for 128

OWNERS of the 128K Spectrum can now obtain a Micronet compatible modem.

The V23 Modem, from Spectre Communications, is approved by British Telecom and is packaged with the Spectre Communications Pack.

The pack contains software on a 16K Rom which will down-load telesoftware to the CET standard, handle normal Prestel modes, provide terminal emulation and a host of features which are commonly available to users' of Micronet.

The modem, which was produced by Tandata, operates at 1200/75 baud for Viewdata services — which include Prestel — as well as at 1200/1200 baud for user-to-user and file transfer applications.

The package, which costs £91.94, can be obtained from Spectre Communications, The Old School House, Tenter Row, Crosby Ravensworth, Penrith, Cumbria CA10 3JA.

The Art of going broke

OXFORD COMPUTER Publishing, recently responsible for **Art Studio** and **Word Manager**, has gone into liquidation.

Bill Richardson, OCP's managing director, blamed the company's failure on the demise of Direco — the French distributor — and also his inability to raise money from outlets on the continent where a large amount of OCP business was done.

The problems were compounded by the difficulties which nearly all "serious" software manufacturers have in getting new products distributed to the retail chain stores. No financial offers have yet been made for the company or its products, however, Richardson is confident that, with the interest show in **Art Studio**, he will find a buyer.



Mystery clouds Amstrad deal

THE FUTURE of the Pandora and Loki machines is still very much in doubt as confusion continues to surround the actual terms of the £5m deal between Amstrad and Sinclair.

Despite the announcement in April which led to Amstrad taking over sales and marketing of Sinclair's Spectrum and QL computer range that Amstrad had "gained rights to all present and future Sinclair micros" one Sinclair insider indicated recently that the agreement only applied to current Sinclair computer technology. He indicated that it did not extend to new products, such as the proposed 'Loki' machine and the Pandora portable and did not preclude Sinclair from continuing to develop and sell its own new computers.

It now seems Sinclair Research is pressing ahead itself with development of the Pandora — now with a liquid-crystal, rather than flat-screen conventional display — and intends to market the machine itself. Quite who now holds the rights to the 'Loki' development is so far impossible to ascertain.

The credibility of Amstrad's deal with Sinclair has been further erroded with news that, far from having "worldwide rights to the Spectrum" as claimed by Amstrad in its announcement to the Stock Exchange on April 7, Portugal and the eastern bloc countries are excluded from the deal.

Rights to the Spectrum in these areas are held by Timex. Timex has been manufacturing its 2048 and 2068 Spectrum derivitive micros in Portugal since it established a shared technology agreement with Sinclair in 1983.

Rights to the communist bloc countries passed to Timex shortly before the deal with Amstrad, as part payment for outstanding debts owed to Timex by Sinclair for manufacture of Spectrum micros and flat-screen TVs at Timex's Dundee plant.

And now, only two months after the rights passed to Timex the firm has succeeded where Sinclair demonstrably failed and tied up the biggest ever deal to supply micros to an Iron Curtain country.

Timex has reached a £50m agreement with an unnamed Polish industrial firm — via its European agent Takis Patrikarakos of Micro Interface — to supply 800,000 Timex 2068 machines and 200,000 FDD 3000 twin 3inch floppy disc drives to the Polish government.

The 2068 is broadly a Spectrum 48 in a new case with improved keyboard, sound chip, cartridge and joystick ports, on/off switch and monitor/RGB output.



The FDD3000 is a dedicated twin 3inch disc system for the Spectrum, adding CP/M operating system and twin RS232C ports.

● Sinclair has successfully established a separate company — called Anamartic — to press on with development of its wafer-scale chip project, backed by £2m of funding from Barclays Bank. It seems likely that the slant of the effort will now be shifted to appeal to minicomputer system users, however.

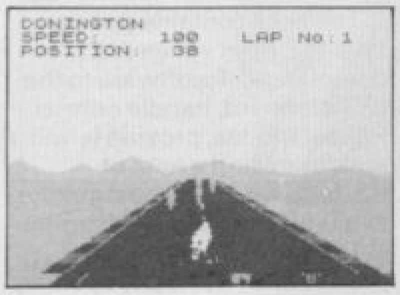


Timex's 2068

'Classic' label move by Elite

ELITE is the latest company to move into budget software with an impressive range of titles at £2.99.

The games, all previous Spectrum chart hits, will be on a new '£2.99 Classics' label. Titles include **Valhalla, Full Throttle,**



3D Death Chase, Skool Daze and **CDS Pool.**

The first title will be on sale on July 21 with others following at weekly intervals.

Sinclair fights theft problem

SINCE Sinclair Research indicated its intention to sell its current home, Metalab at Milton Hall, Cambridge, to shed the majority of its staff and to move into smaller premises the company has been the victim of a number of thefts.

A large quantity of test and other development equipment has apparently gone walkabout, courtesy of various disenchanted staff.

The situation has now got so bad that Sinclair has offered a general amnesty against prosecution to anyone returning equipment 'liberated' from its rightful home.

Tony Tebby, author of the QL's operating system, was himself approached by an ex-Sinclair magpie who offered him a copy of the operating system for a super QL which Sinclair had been planning to launch before the Amstrad deal. Tebby says: "The value of the operating system could be as much as £½ million and the police were contacted.

"We agreed to meet the person and two CID officers were present in the next room to record the meeting.

"But when he arrived he told us that he'd decided not to sell the OS because the deal could drastically affect his career. The CID later said that that was an understatement," says Tebby.

When police later raided the suspect's house they found the system tapes in a plastic bag.

Super QLs to use full 68000 chip

TWO NEW 'Super' versions of the QL will soon be launched — one from CST in September at the *Personal Computer World* Show and the other from Farmintel in October.

The first, from disc drive manufacturer CST, is called the Thor and is based on the design developed from Sinclair's own QL 2. It uses the 68000 chip, will cost £550 and includes a 720K floppy disc drive and all the peripheral connections which are available on the original QL. It will also be possible for owners of the existing machine to buy the Thor shell and slot in their own QL printed-circuit board — the ultimate up-grade. An advanced version will cost £1,300 and include a 20M hard disc. The Thor features an IBM PC-type keyboard which is attached by a flexi-cable to the main console box. The disc drives are at the front of the machine and a colour monitor is balanced on top. On-board software includes the QDOS II, Tony Tebby's **Super Toolkit** and SuperBasic.

CST plans to launch a third version of the new machine which will incorporate a 32-bit 68020 processor and contain multi-tasking hardware. No prices have been fixed for the Thor model.

The second new QL, the QLT produced by Farmintel, the British arm of Italian hardware manufacturer Sandy, has been developed by Tony Tebby, author of QDOS. Like the Thor it will be 68000-based and QL software compatible with considerable hardware compatibility, but it will be targeted at the sub-£500 Atari ST price range.

The machine will run three to ten times faster than the QL, have a minimum Ram configuration of 0.5M with an 8M plug-in up-grade and have the capacity for two floppy discs and one hard disc drive.

The back of the box gives access to a myriad of peripheral interfaces which include a parallel printer port, joystick and mouse connections and a MIDI interface.

Tebby intends to produce a replacement Rom for existing QL owners which will correct the bugs in their operating systems and give it some of the power of QLT.

The operating system is independent of the machine's peripherals so no errors would occur if, for instance, software called a QT peripheral when running on a QL — it will defeat the presence or absence of a MIDI board if connected and act accordingly.

Tebby says: "Initially the QLT was to be less compatible with the QL than it is now but already there are several pieces of software being developed for it by independent software houses.

"QL and QLT software are interchangeable."



Domark's new blockbuster is Trivial

THE MAD scramble to licence that Holy Grail of money spinners *Trivial Pursuit,* is over.

The designers of the game have awarded the deal to Domark.

The game will replicate the *Trivial Pursuit* board on screen but will contain questions which make use of the sound and graphics facilities of the computer. Multi-player games will function like the board game with other players ensuring that nobody cheats, however a one-player option will feature multiple choice answers selected with the joystick.

Domark plans 3,000 questions held in blocks which are loaded in as required from tape. The game is near to completion, but release will be timed for the Christmas market — probably at the *Personal Computer* Show in September.

Price for the program will be a whopping £14.95 without posters, booklets, badges or any other form of promotional device.

Domark watchers will be pleased to know that the masters of marketing haven't entirely changed their image — there is to be a *Trivial Pursuit* knock-out competition later in the year with a solid gold *Trivial Pursuit* set as the prize which, Domark are currently having valued.

Trivial Pursuit TM



Spike Sparkler's pick of the hits. Six Super Games at only £1.99 each– Street Date 16 June.

SNODGITS

Test your sleuthing skills against world famous detectives. They're all there hunting the slippery Snodgits—dreadful little creatures who wreak havoc in Lord and Lady Snodger's snobsville mansion. A must for all bright sparks. Amstrad CPC-464 and Spectrum 48K.
Sparkle rating ****

White Viper

A real snake of a game this! There are white horses to tame, ghostly henchmen to overcome and a nasty Wizard to out think. But the rewards are high—the hand of a smashing princess and your very own kingdom. For only £1.99—they must be potty! Commodore 64.
Sparkle rating *****

DANGERMOUSE IN DOUBLE TROUBLE

Help the super rodent overcome Baron Greenback's latest ploy. The evil villain is building an android Dangermouse. You must stop him and defuse the danger. This game is not for the amateur!
Commodore 64 and Spectrum 48K.
Sparkle rating *****

MAD DOCTOR

Here's a chance to create your own monster! No kidding—all you have to do is collect the bits. As Dr Franz Blockenspiel you grab unsuspecting passers-by and drag them back to your lab. Gruesome and dangerous—the irate villagers are after you. Grab your gown and get scalpelling! Commodore 64. Sparkle rating ****

KIDNAP

Babes in space! Kkrudd an evil alien has kidnapped tiny Earthlings and frozen them in suspended animation. You must rescue them from their fate. Bizarre, unknown creatures are on guard—you need all your skill to defeat them. Utterly captivating! Spectrum 48K.
Sparkle rating ****

Tower of Evil

Have you ever fought a Baphomet? Well, they are no pushover. They guard where the Princess is imprisoned and have some equally horrendous friends. Poor old Princess Diana — locked away in the clutches of the Necromancer. You are her only hope. Commodore 16.
Sparkle rating ****

AVAILABLE FROM ALL GOOD SOFTWARE STORES

Sparklers

Unit B11 Armstrong Mall, Summit Centre, Southwood, Farnborough, Hants. GU14 0NP Tel: 0252 522200

WANTED

HIGH QUALITY PROGRAMS WANTED FOR

SINCLAIR
SPECTRUM
AMSTRAD 464/664/6128
COMMODORE C16/C64/C128
ATARI XL/XE/ST
computers

contact Philip Morris
NOW!
061-835 1356

All programs and samples of work are evaluated in strictest confidence. Call or write today.

ENGLISH SOFTWARE™
1 North Parade,
Parsonage Gardens,
Manchester M60 1BX.

We're waiting to hear from you!

SHEKHANA COMPUTER SERVICES

SPECTRUM	RRP	OUR PRICE
Pyracurse	9.95	7.50
World Cup Carnival	9.95	7.95
Splitting Images	7.95	5.95
Equinox	9.95	7.50
Mantronix	7.95	5.95
Iwo Jima	7.95	6.50
Theatre Europe	9.95	7.95
Ian Bothams Cricket	7.95	5.95
Dynamite Dan 11	7.95	5.95
There Finest Hours	9.95	7.95
Falklands 82	7.95	5.95
Pentergram	9.95	7.50
Pub Games	9.95	7.50
Arnenham	9.95	7.50
Treasure Hunt	7.95	5.95
Quazatron	8.95	6.75
Bomb Jack	7.95	5.95
Elite	14.95	11.95
Commando	7.95	5.95
Lord of the Rings	15.95	12.95
Fairlight	9.95	7.50
Back to School	6.95	5.50
Tomahawk	9.95	7.50
Sword and Sorcery	9.95	7.50
Sweevos World	7.95	5.95
Rock and Wrestle	8.95	6.75
Who Dares Wins 2	8.95	6.75
Cyberrun	9.95	7.50
Gun Fright	9.95	7.50
Star Strike II	7.95	5.95
Southern Belle	7.95	5.95
Mugsy's Revenge	7.95	5.95
Artist II	14.95	12.95
Fighter Pilot	7.95	5.95
Blockbusters Gold Run	9.95	7.50
Ping Pong	7.95	5.95
The Planets	9.95	7.50
Spit Fire 40	9.95	7.50
Worm in Paradise	9.95	7.50
The Price of Magic	9.95	7.50
Southern Belle	7.95	5.95
Inter Karate	6.50	4.99
Jet Set Willy II	6.95	5.50
Any Mastertronic Games	1.99	1.99
Monopoly	9.95	7.95
Daley Toms Supertest	6.95	5.50
Mini Office	5.95	4.99
Sai Combat	6.95	5.95
Transformers	7.95	5.95
Rambo	7.95	5.95
Ram Turbo Interface		18.00

SPECTRUM	RRP	OUR PRICE
Quick Shot II Joystick		8.95
Sold A Million 2	9.95	7.50
Skyfox	8.95	6.75
Batman	7.95	5.95
Superbowl	9.95	7.50
Red Hawk	9.95	7.50
Biggles	9.95	7.50
Turbo Esprit	8.95	6.75
Alien Highway	7.95	5.95
Enigma Force	9.95	7.50
Saboteur	8.95	6.75
Critical Mass	8.95	6.75
Way of the Tiger	9.95	7.50
Strike Force Harrier	9.95	7.95
Ghost and Gobblins	7.95	5.95
Empire	9.95	7.50
Questprobe	9.95	7.50
The Art Studio (OCP)	14.95	12.95
Yie Ar Kung Fu	7.95	5.95
Young Ones	7.95	5.95
Movie	7.95	5.95
Desert Rats	9.95	7.50
Winter Games	7.95	5.95
Beach Head II	7.95	5.95
B. McGuigans Boxing	7.95	5.95
Kung Fu Master	7.95	5.95
Heavy on the Magick	9.95	7.50
Rebel Planet	9.95	7.50
Red Moon	6.95	5.95
Cauldron II	8.95	6.95
Bounces	9.95	7.50
Graphic Adven Creator	22.95	19.95
Artist	12.95	9.95
Graham Gooch	9.95	7.50
Kirel	9.95	7.50
Computer Hits 2	9.95	7.95
Core	9.95	7.95
Rescue on Fractalus	9.99	7.50
Time Trax	9.95	7.50
Office Master	15.00	12.95
Nexus	9.95	7.50
Action Reflex	7.95	6.50
***Spectrum 128 Titles	*9.95	7.50
International Match Day	9.95	7.95
Gladiator	9.95	7.95
3 Weeks In Paradise	9.95	7.95
Knight Tyme	2.99	2.99
Ballblazer	9.95	7.95
Hacker	9.95	7.95
The Music Box	9.95	7.95
Nodes of Yesods	9.95	7.95

All prices include P&P in UK. Europe add £1 per tape. Elsewhere at cost.
Cheque/PO payable to: **S.C.S (SIUS) PO Box 394 London N15 6JL.**
Telephone 01-800 3156. SAE for list. *Please ring for availability.

If you would like to pick up your discount software from our shop, please bring your copy of this advert for above discounts. To
SCS, 221, Tottenham Court Road, London W1R 9AF.
(Near Goodge Street Station).
Open 6 days a week 10.00-18.00.

Access

Barclaycard and Access hotline ring 01-631 4627 only.
Credit Card orders dispatched same day
(subject to availability).

VISA

Situation normal at Sinclair

THE FAMOUS organisational abilities of Sinclar Research were sorely tested at a recent sale of equipment and fittings at its Milton Hall base in Cambridge (see *Gremlin*).

One famous face who put in an appearance described the scene as 'total chaos'. He continues: "We were told to arrive at 9.00am but we were still waiting at 10.30. When we got in we discovered that there was only one list of equipment for all of us to look at. Our guide then asked if any of us knew what we wanted to buy but when I told him what I wanted he couldn't find it anywhere."

Although Sinclair's 'Bazaar' was not successful the company still wants to rid itself of its old equipment. It has apparently employed a team of hawkers on a commission basis to get rid of its unwanted wares.

Sinclair Research is to vacate its Milton Hall home, moving to a smaller location after the sale of its Spectrum and QL computer activities two months ago to Amstrad.

Fourth game guide book

THE FOURTH Protocol, the book of the game of the original Frederick Forsythe novel is soon to be released by Century Communications.

If you bought the icon-driven adventure last year and still don't realise who is a perverted black magician, or what the words 'traffic lights' mean then the book, for £5.95 written by program authors John Lambshead and Gordon Paterson, is a mine of information.

It describes the philosophy behind the game and provides hints on how to get through the most difficult sections.

Apologies

THE WRITER: In the May issue we implied that The Writer by SofTechnics is only 128K compatible. The program is both 128K and 48K compatible and a full review of the 48K version will appear in the August issue.

ERIC THE VIKING: In the Complete Software Guide gift with the June issue we said the Mosaic program (reviewed in the January 1985 issue) got two stars — it got four.

Faulty micros move

AMSTRAD has run into trouble with its new returns policy for faulty Spectrums.

Since the Amstrad buy-out in April the company has been insisting that all faulty Spectrums should be returned to the retailer from which the machine was purchased, and should not be returned to Amstrad direct.

However, many customers with machines still under warranty have either bought their micros from a shop which is no longer trading or bought their machines direct from Sinclair.

Now Amstrad has established a recognised service agent for Spectrum repairs. Called Computafix, the firm can be contacted at Unit 2, Albany Park, Frimley Road, Camberley, Surrey GU15 2PL.

Machines still under warrenty which for some reason cannot be returned to the retailer should be returned directly to Computafix.

● The confusion created by the new returns procedure has led one company, CPC, to release a comprehensive Spectrum Workshop Manual providing complete information for competent DIY electronics hobbyists who want to repair their own machine. CPC is at 194-200 North Road, Preston, Lancs and the manual costs £15.00 plus p&p.

Mastertronic to go public

MASTERTRONIC, Britain's leading budget software house, is preparing for a launch on to the stock market.

The company hopes to make the move in the second half of 1987 but no firm decision will be made until all the factors governing the state of the stock market — such as political climate and economic conditions — are taken into consideration.

In the past two years, City investors have learned to be wary of computer companies. Acorn — in its day the biggest ever USM (Unlisted Securities Market) offering — performed very badly, its share price plumetting from over 300p to just 8p before Olivetti took control of the company. A month after the Acorn scare Sinclair Research dropped plans for its stock market floatation and seemed to be preparing for liquidation before creditors worked out a plan for payment of debts.

The sale of the computer assets of Sinclair Research did little to bolster confidence but was offset by Amstrad's success story.

Mastertronic is to use the money raised from its floatation to finance a move into areas other than budget software starting with a range of utility packages.

Last year the company, with its vast range of budget titles, made £200,000 on a turn over of £2 million. Frank Herman, chairman of Mastertronic, hopes that the result for the next financial year will nearly double the profits.



Level 9 plays by 'phone

LEVEL 9, Britain's top adventure game publisher, is creating a play-by-phone game to rival British Telecom's Multi-User Dungeon (MUD).

Codenamed **Avalon** it will be similar in constuction to MUD but the hardware used to drive it has about 100 times the power of BT's modem-based operation. **Avalon** will, according to Level 9, have at least 10,000 locations and 1000 computer-controlled characters. It will have its own history and even its own calendar — each month in the real world will correspond to one year in **Avalon**.

Level 9 is also writing two new adventures for Rainbird to be published later this year. **Jewels of Darkness,** is a mega-mix version of the **Middle Earth** adventures. They have been enhanced with extra text, pictures and multi-tasking together with all the other features of their latest adventure system.

Then comes **Knight Orc,** a game which turns the tables on hack-and-slay adventurers. You play an Orc 'hero' whose friends have been destroyed in all manner of obnoxious ways since adventure gaming began. **Knight Orc** gives you a chance for revenge.



Domark game sparks row

DOMARK HAS run into a storm over its sliding block game **Splitting Images.**

Fluck and Law, creators of the TV Program *Spitting Image,* think the name of the game is too close to their copyright for comfort.

Domark has decided now to change the name of its game to **Split Personalities.** "We didn't want to step on any toes, the game has no similarities with the TV program, even the characters are different," said Dominic Wheatley.

"But we've decided to change to title to **Split Personalities.**"

C up-date from HiSoft

A NEW version of the Hisoft C compiler for the Spectrum is on the way.

Version 1.3 of the package will compile larger programs and includes a facility which crunches source code to make it into faster and smaller object code. The package also contains an expanded macro library which will allow programs which have been developed on the Spectrum to be coverted for use on other microcomputers.

Spectrum C can be obtained from HiSoft, 180 High Street North, Dunstable, Beds LU6 1AT.



C 64 VERSION — ZZAP! 64
'FLIGHT SIMULATOR OF THE YEAR'
OUT NOW —
SPECTRUM VERSION £9.95
C PLUS/4 DISK VERSION £12.95
(FULL 64K PLUS/4 VERSION)
FREE POSTER WITH EVERY COPY
ACE
"AT LAST YOU CAN REALLY FLY!"
RAF PILOT
"I JUST COULDN'T BELIEVE HOW MUCH THERE WAS IN IT" ZZAP! 64
"ACE IS ONE OF THE BEST SIMULATORS I HAVE EVER PLAYED" CCI
"THERE ARE FLIGHT SIMULATORS AND THERE ARE FLIGHT SIMULATORS — AND THEN THERE'S ACE"
COMPUTER AND VIDEO GAMES
cascade
CASCADE GAMES LTD
CASCADE GAMES LTD., HARROGATE, HG1 5BG, ENGLAND.
Available from all good software suppliers or direct from
Cascade-24 hour ordering service on (0423) 504663
Versions available for: SPECTRUM 48k,
C 64/128, C 16, VIC20, PLUS/4,
CASSETTE £9.95
£12.95

SINCLAIR TITLES

PEDRO	£1.25
AH DIDDUMS	£1.25
DOMINOES	£1.25
RUNES OF ZENDOS	£1.50
BACKPACKERS GUIDE	£1.95
BRAXX BLUFF	£1.95
CYCLONE	£2.95
ANDROID I	£2.95
ANDROID II	£2.95
CONFUZION	£1.95
CHUCKIE EGG II	£2.95
WIZARDS LAIR	£3.95
HIGHWAY ENCOUNTER	£3.95
BUGABOO THE FLEA	£2.50
JONAH BARRINGTONS SQUASH	£2.95
THE TRAIN GAME	£2.95
HEROES OF KARN	£2.95
WHEELIE	£3.95
QUICKSILVER WORD PROC.	£2.50
M/CODER II	£2.50
CODENAME MATT II	£2.95
GREMLINS	£2.95
ARROW OF DEATH PT. I	£2.50
ARROW OF DEATH PT. II	£2.50
TASWORD II	£4.95
MOON CRESTA	£3.95
JASPER	£1.95
ROBIN OF SHERWOOD	£4.95
BLUE MAX	£4.50
GT SPACE RACE	£1.95
THE ILLUSTRATOR	£5.95
SHADOWFIRE	£4.95
SUBTERRANEAN STRYKER	£1.95
SKOOLDAZE	£3.95
DECATHLON	£4.50
SABRE WULF	£4.50
DEVS EX MACHINA	£3.95
UNDERWORLD	£4.50
GIFT FROM THE GODS	£4.50
JET SET WILLY	£2.95

SELECT I (12 GAMES)	£3.95
VOLCANO	£1.95
PACMAN (BY ATARISOFT)	£4.95
GEOGRAPHY QUIZ	£1.95
CUSTARD KID	£2.95
ROLANDS RAT RACE	£4.50
TWIN KINGDOM VALLEY	£2.95
AVALON	£3.95
HEATHROW A.T.C.	£2.95
ROBIN OF SHERLOCK	£4.95
AIRLINER	£2.50
LAZY JONES	£2.50
VIEW TO KILL	£2.95
SON OF BLAGGER	£1.95
TECHNICIAN TED	£3.95
BRIAN JACKS SUPERSTARS	£3.50
EDDIE KIDDS JUMP CHALLENGER	£3.50
AD. ASTRA	£3.95
TIR NA NOG	£4.95
PSYTRON	£1.95
LORDS OF MIDNIGHT	£3.50
VALHALLA	£2.50
BLOCKBUSTERS	£3.95
BEACH HEAD	£3.50
T.L.L.	£2.95
SPANISH TUTOR A - B	£3.95
DERBY DAY	£1.25
JEWELS OF BABYLON	£3.95

SOFTWARE PACKS EDUCATIONAL

PHYSICS 'O' & 'A' LEVEL, MATHS 'O' LEVEL, CHEMISTRY 'O' LEVEL, BIOLOGY 'O' LEVEL — £9.95 or £3.00 each

COLLINS PACK 4-11 YEARS
WHATS THE TIME, KNOW YOUR TABLES, FIRST NUMBERS — £7.95

COLLINS PADDINGTON PACK INC.
PADDINGTONS EARLY VISIT, PADDINGTONS GARDEN GAME, PADDINGTON AND THE DISAPPEARING INK — £7.95

HILL McGIBBON PACK INC.
PUNCTUATION PETE, BALLOONING, CAR JOURNEY, SPECIAL AGENT — £7.95

COLLINS SOFTWARE PACK INC.
SUPER WRITER (6-9 YRS), NURSERY RHYME ADVENTURE (4-6 YRS) — £4.50

LONGMAN SOFTWARE 6-10 YEARS
SUM SCRUNCHER, ROBOT RUNNER, WILD WORDS, A.B.C. LIFT OFF — £6.95

SULIS SOFTWARE PACK INC.
STARTER WORDSPLITS, JUNIOR WORDSPLITS, GRAMMAR TREE (INC. NOUNS & ADJECTIVES), GRAMMAR TREE (INC. VERBS & ADVERBS) — £5.95

MR T. PACK INC.
MR T'S SIMPLE SUMS, MR T. MEETS HIS MATCH, MR T'S ALPHABET GAMES — £5.95

MR T. PACK INC.
MR T'S NUMBER GAMES, MR T'S SHAPE GAMES, MR T'S MEASURING GAMES — £5.95

GRIFFIN SOFTWARE PACKS INC. 5 YEARS & OVER
WORDSPELL, FAIRSHARE, WORDGAMES — £6.95

GRIFFIN SOFTWARE PACK INC. 5 YEARS & OVER
TABLESUMS, NUMBERFUN, GET SET — £6.95

GRIFFIN PYTHAGORAS PACK INC. 10-15 YEARS
THEORUM OF PYTHAGORAS, FORMULAE & COMPOUNDS, FUNDAMENTAL ALGEBRA — £6.95

GRIFFIN MATHS & CHEMISTRY PACK 10-15 YEARS
ATOMS AND MOLES, INTRO TO TRIGONOMETRY, MENTAL ARITHMETIC — £6.95

GAMES PACKS

HORACE & SPIDERS, PLANETOIDS, HUNGRY HORACE, TRAXX, SPACE RAIDERS, ORACLES CAVE — £6.95

BUBBLE BUSTER, BACKGAMMON, BIORYTHMS, GRIDRUNNER, REVERSI, MANIC MINER — £7.95

ON THE OCHE, DERBY DAY, ST. ANDREWS GOLF, WORLD CUP FOOTBALL, SNOOKER, OLYMPICS — £5.00

PANZER ATTACK, DREADNOUGHTS, RED BARON, PARAS — £5.00

IMAGE PACK INC.
COSMIN CRUISER, ZOOM, ZIP ZAP, ALCHEMIST, PEDRO, B.C. BILL — £5.95

SOFTWARE PROJECT PACK 8 TITLES INC.
ZIGGURAT, FREEX, MOONLIGHTER, LOONY LANDER, FLIP FLAP, SHUTTLE SHOCK, SUPER CHOPPER, FREDS FAN FACTORY — £9.95 or 2.00 each

THE BARGAIN PACK any 5 for £5.00
MURDER AT THE MANOR, GRIDGATE, HANDY ANDY, CORRUPTION, GALACTIC GAMBLER, COPTER, GALACTIC PATROL, WILD WEST, POOL, STOMP

HUNGRY HORACE, FLIGHT FROM DARK, 3D BAT ATTACK, ZIP ZAP, TILER, POOL — £6.95

SILVERSOFT PACK INC.
SUPERMUTT, ARCADE ACTION ORBITER, STARSHIP ENTERPRISE, CYBER RATS, ARCADE ACTION, SLIPPERY SID — £5.00

UTILITIES & PERIPHERALS

GO MICRO (DATABASES, QUIZZES, SOUND & GRAPHICS)	£2.50
SCOPE II GAMES DESIGNER	£6.95
MICROL THE WORD PROCESSOR	£5.95
MICROL USE & LEARN	£5.95
MICROL THE DATABASE	£5.95
SPEC DRUM DIGITAL DRUM SYSTEM	£25.00
D.K. TRONICS KEYB'DS	£27.95 (£2.00 p&p)
SAGA EMPORER KEYB'DS	£37.95 (£2.00 p&p)
SAGA ELITE KEYB'DS	£67.95 (£2.00 p&p)
THERMAL PAPER FOR ALPHACOM 32 TIMEX 2040 PRINTERS	£8.95 5 ROLLS
WICO TRACKER BALLS	£14.95

p&p 75p all orders
Overseas 70p Software
£2.50 Software packs £5.00 Peripherals

LOGIC SALES LTD
6 Midgate · Peterborough · Cambs
24 hour ordering on 0733 313870

ESSENTIAL FOR TEXT AND SUPERB FOR GRAPHICS

HIGH RESOLUTION COLOUR MONITOR

14" SCREEN RESOLUTION (585 x 895 PIXELS)

from only **£249.95**in VAT

SOUND FACILITY AVIALABLE £17.50

AVAILABLE IN WOOD OR METAL CASE

(Add £19.95 incl. for metal case only)



Chroma I

for SPECTRUM, SINCLAIR QL and BBC .... £249.95inc VAT
for AMSTRAD inc. 5 volt and 12 volt supplies .... £264.95 inc VAT
for ATARI 520 and 1040 .... £269.95 inc VAT

SUITABLE FOR OTHER COMPUTERS — PLEASE ASK

ALL MODELS INCLUDE INVERSE SWITCH AND TTL/ANALOGUE SWITCHES

COD or Send your cheque to:
CHROMAGRAPHICA, 135 Cliff Road, Hornsea, North Humberside, HU18 1JB
Telephone **0482 881 065** (DAYS) **04012 4699** (Evenings)

NAME..
ADDRESS..
TELEPHONE...................COMPUTER.....................

Please supply: Chroma I £249.95 + £9.95 (Carriage)
Converter (*for Spectrum 48K*) £28.95 inc VAT
metal case £19.95 inc VAT. Sound £17.50 inc VAT

Colour .... Wood ☐ Metal ☐

SU6

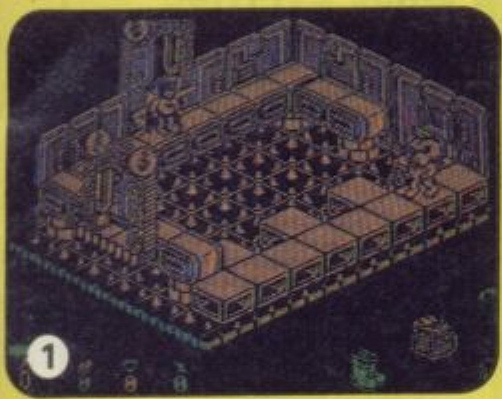
MEGASAVE FANTASTIC SAVINGS

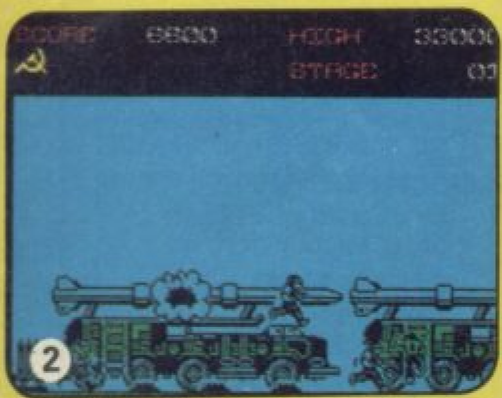
Yie Ar Kung Fu	5.95	Starquake	5.95	V	5.95
Treasure Hunt	5.95	Comet	5.95	Spitfire 40	7.50
Rambo	5.95	Silent Service	7.50	Flintstones	5.95
Hot Shots	5.95	Critical Mass	6.75	Rebel Planet	7.50
Equinox	7.50	Sold A Million II	7.50	Super Bowl	7.50
Tapper	5.50	W.S.Basketball	5.95	The Planets	7.50
Spy Hunter	5.50	Cauldron Ii	6.75	Goonies	5.95
Grph. Adv. Creator	19.50	Paper Boy	5.95	Finest Hour	7.50
Dambusters	7.50	Sword & Sorcery	7.50	Nomad	5.95
Price of Magick	7.50	Tomahawk	7.50	Battle of Planets	7.50
Bounces	7.50	Empire	7.50	Penta Gram	7.50
World Cup Carnival	7.50	Saboteur	6.75	Gunfright	7.50
Core	6.75	Back to Skool	5.25	Gladiator	6.75
Hyper Sports	5.95	Friday the 13th	6.75	Death Wake	5.95
F.B. Boxing	5.25	Graham Gooch	7.50	Dessert Rats	7.50
NF Open Golf	7.50	Sweevo's World	5.95	McGuigan Boxing	5.95
Exploding Fist	6.95	Splitting Images	5.95	Lazer Basic	12.50
Off the Hook	7.50	Terror Trantoss	5.95	Ping Pong	5.95
Quazatron	6.75	3 Week Paradise	7.50	Star Strike II	5.95
Fairlight	7.50	Commando	7.50	Heavy on Magick	7.50
Terrormolinos	5.95	Snowqueen	7.50	Quest Proke	7.50
Time Trax	7.50	Enigma Force	7.50	Toad Runner	5.95
Who Dares Wins II	5.95	Tau Ceti	6.75	Winter Games	5.95
Pyracyrse	7.50	Mugsy's Revenge	5.95	Art Studio	12.50
Dynamite Dam Dan II	5.95	The Rock 'n' Wrestle	6.75	Twister	5.75
Action Reflex	5.95	Cyberuim	7.50	Turbo Esprit	6.75
Computer Hits II	7.50	FA Cup	5.95	West Bank	5.95
Elite	11.25	Roller Coaster	5.25	Way of the Tiger	7.50
Bounder	7.50	The Young Ones	5.95	Movie	5.95
Hocus Focus	6.75	Strike Force Harrier	7.50	Tantalus	6.75
Fighting Warrior	5.95	The Pawn	7.50	30 Games	7.50
Crash Smashes	7.50	Wartoad	5.95	Back to Future	7.50
Sai Combat	5.50	Mickie	5.95	Max Headroom	7.50
Bomb Jack	5.95	Now Games 2	6.75	Ghosts & Goblins	5.95
Zoids	5.95	Forbidden Planet	5.95	Spin Dizzy	5.95
Green Beret	5.95	Nexus	7.50	Red Hawk	6.75
Kirel	6.75	Sky Fox	6.75	Realm of Imposs.	6.75
Biggles	7.50	Alien Highway	5.95	Batman	5.95

Postage included UK. Please state which micro. Fast Service.

Send cheque/PO to: MEGASAVE, Dept SU7
49H Sutherland Street, Victoria, London W1
Mail Order only

GALLUP TOP 30 CHARTS







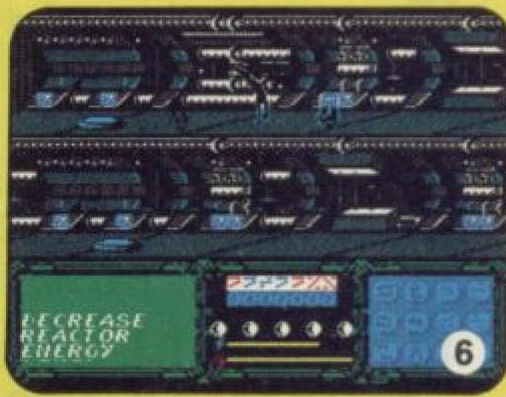


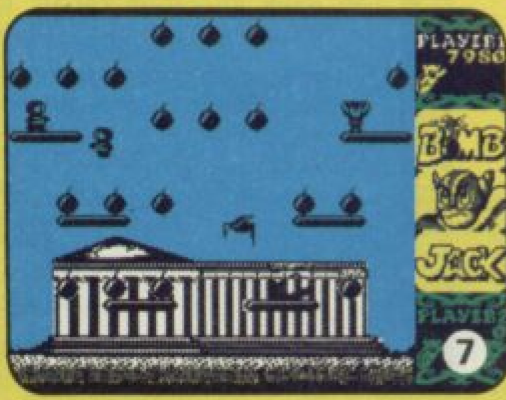


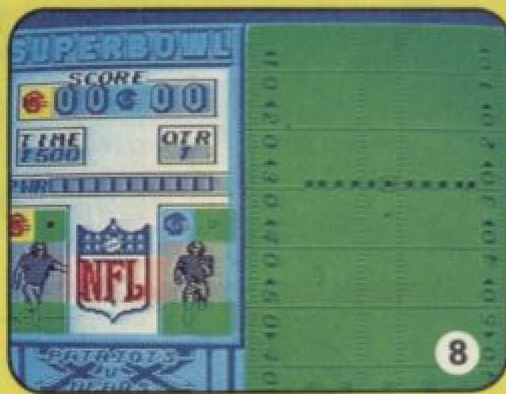
1	*NEW!* BATMAN	OCEAN	*£7.95*
2	(1) GREEN BERET	IMAGINE	*£7.95*
3	(13) STARSTRIKE 2	REALTIME	*£7.95*
4	*NEW!* HEAVY ON THE MAGICK	GARGOYLE	*£9.95*
5	(2) WAY OF THE TIGER	GREMLIN	*£9.95*
6	(4) V	OCEAN	*£7.95*
7	(3) BOMB JACK	ELITE	*£7.95*
8	(7) SUPERBOWL	OCEAN	*£9.95*
9	*NEW!* CYBERUN	ULTIMATE	*£9.95*
10	(6) TURBO ESPRIT	DURELL	*£8.95*
11	(5) INCREDIBLE SHRINKING FIREMAN	MASTERTRONIC	*£1.99*
12	(17) SPORT OF KINGS	MASTERTRONIC	*£2.99*
13	*NEW!* QUAZATRON	HEWSON	*£8.95*
14	*NEW!* SKY RANGER	MASTERTRONIC	*£1.99*
15	*NEW!* THEY SOLD A MILLION (2)	HIT SQUAD	*£9.95*
16	(15) SAMANTHA FOX STRIP POKER	MARTECH	*£8.95*
17	(26) COMPUTER HITS 10 VOL 2	BEAU JOLLY	*£9.95*
18	*NEW!* THE PLANETS	MARTECH	*£9.95*
19	(12) SPELLBOUND	MASTERTRONIC	*£2.99*
20	(18) CRASH SMASHES	GREMLIN	*£9.95*
21	(8) FA CUP FOOTBALL	VIRGIN	*£7.95*
22	*NEW!* SPINDIZZY	ELECTRIC DREAMS	*£9.99*
23	*NEW!* BOUNDER	GREMLIN	*£7.95*
24	(10) DEVILS CROWN	MASTERTRONIC	*£1.99*
25	*NEW!* ALIEN HIGHWAY	VORTEX	*£7.95*
26	*NEW!* OFF THE HOOK	OFF THE HOOK	*£6.99*
27	(20) EMPIRE FIGHTS BACK	MASTERTRONIC	*£2.99*
28	(16) FORMULA ONE SIMULATOR	MASTERTRONIC	*£1.99*
29	*NEW!* TICKET TO RIDE	MASTERTRONIC	*£1.99*
30	(14) CAVES OF DOOM	MASTERTRONIC	*£1.99*

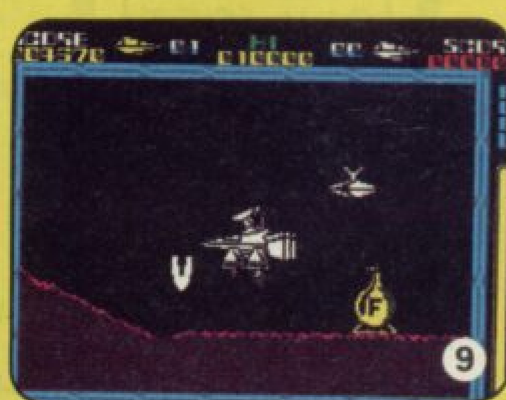
BUBBLING UNDER

ROCK 'N' WRESTLE	MELBOURNE HOUSE	*£8.95*
KNIGHT TYME	MASTERTRONIC	*£2.99*
PRICE OF MAGIK	LEVEL 9	*£9.95*
CORE	A & F	*£9.95*
DESERT HAWK	PLAYERS	*£1.99*
SPIKY HAROLD	FIREBIRD	*£1.99*
INDOOR SOCCER	MAGNIFICENT 7	*£1.99*
SEABASE DELTA	FIREBIRD	*£1.99*
SECRET OF LEVITATION	AMERICANA	*£2.99*
SODOV THE SORCERER	BUG BYTE	*£2.95*

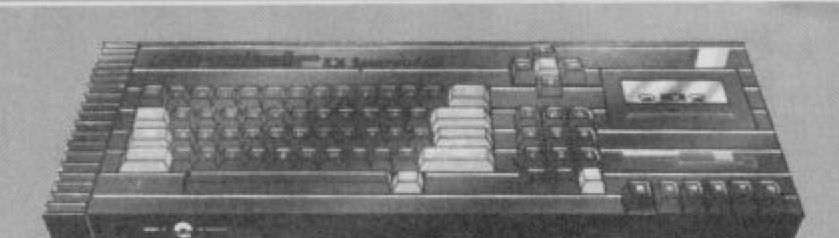












Loki to hit dwarf 464?

I AM AMAZED at the plans for a 'SuperSpectrum'. What worries me is whether Amstrad will launch such a machine.

They surely wouldn't want to endanger their CPC series, yet the 'Loki' dwarfs the 464/6128 in its capabilities. And what of existing 48K or 128K owners? Must they follow in the footsteps of the 16K Spectrum owners, ie see a gradual decline of software then production ceased of their machine?

An Amiga type machine for under £200 sounds incredible. A dream micro. But how long will it be before that too is superceded. The trouble with the micro industry is that micros do not stnd the test of time. They either get off on the wrong foot from the start (QL, Memotech, Oric), or they are superceded within a year or so of production (Atari XL series, Commodore Plus 4 and C16 and the infamous Amstrad CPC 664).

If Amstrad do launch the Loki it looks as though my old 48K Issue 2 will be traded in for a new model. Until then I wait with anticipation.

Darren Stanley
Worthing

● *The Loki is a very exciting idea. But we don't know how much more than just an idea it is. Certainly Sinclair had a team working on its development but nearly all the effort and cost of development for the Loki is in the final stage of the design and manufacture of the two LSI custom chips to handle sound and graphics.*

If, as seems likely, Sinclair was unable to fund the development costs of these chips, then the Loki was still a very long way from the shops. Also, Amstrad has not so far proved to be the kind of company to fund heavy development effort of this kind. Alan sugar prefers things that are tried and tested — like CP/M and the General Instruments sound chip.

At this stage, whether the Loki will ever go into production is very uncertain. But it's a great machine and I'd buy one like a shot if it ever came out.

Even sadder is that if Sinclair/Amstrad doesn't do it someone else probably will.

More on Clive's climb down

IT IS VERY sad to witness the recent events at Sinclair and the Amstrad buy-out.

There is no doubt that without Clive Sinclair the home computing industry as we know it would not have happened at the time that it did.

Although many of his machines are used solely for games, there are many of us who use home computers for more serious applications. However, without the mass market created by the games



users we would all have a paid a much higher price.

If Sir Clive had finally decided he was tired of running the business then there would have been many options which he could have pursued in the furtherance of the Sinclair product range and in the interests of his many supporters.

The only really inconceivable option would have been to have sold out to his largest competitor. That indeed is a tragedy. It is somewhat ironic that in spite of the ocassional bad press which Sinclair has enjoyed his supporters have remained faithful and yet have now been let down. We do not deserve this final stab in the back. I certainly do not understand how Sir Clive could have endured the final humiliation of having his computers described as just 'pregnant calculators' by Mr Sugar.

I fervently hope that the new owners of the Sinclair range will use all their management skills to continue the product range and its manufacture in the UK.

B J Sprules
Old Oxted
Surrey

Microdrive concern

I OWN a QL and use it for business. Because of the Amstrad take over I would like to know for how long hardware, software and microdrive cartridges will continue to be produced?

A Patterson
Popplewick
Berkshire

● *Hardware and software should be no problem because very little of it is Sinclair originated. The Microdrive situation is altogether more confusing. Amstrad doesn't have the rights to Microdrives, but it isn't clear who does. It's currently a toss-up between Sinclair and Ablex, the microdrive cartridge manufacturer. We'll keep you informed.*

The Ultimate insult and . . .

WE THINK that perhaps one of our programmers might be contemplating possibly thinking about may trying to come up with an original idea for a new game. Please place the following advert in your magazine at once:

"Out now — A revolution in 3D hype. We've stopped working hard designing a flashy new box for **Knight Lore** and thinking of another new title to release it under, all research into the astoundingly original Filmation 79© graphics system has stopped (well we were just about to start — honest), no longer will the computer



shelves house chunky black cassette boxes which actually look as if they're worth £9.95. No — we've drawn on all our past experience this time and come up with **Jet Pac**, err I mean **Lunar Jetman!** Well who cares what it's called. Nobody reads the cassette inserts anyway 'cos they're full of silly stories that take about 20 times longer than the game to think up. (And half an hour is quite a while.)

Lots of love

Ultimate Play The Same Bloody Game Over And Over Again

. . . Ultimate fans hit back

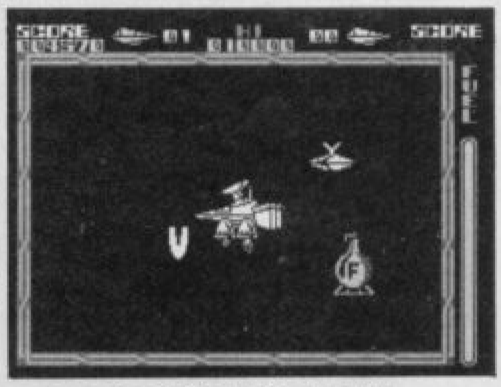
CYBERUN only 3 stars? Clare Edgeley's brain is missing.

U Twit
Gosforth
Newcastle-upon-Tyne,

● *Thanks U Twit*

MY LETTER concerns your disgraceful review of **Cyberun**. Clare Edgeley needs her head seeing too. Allow me to explain what the idea of **Cyberun** is. You should find the parts of your ship (excellent sprites I might mention) in the right order and then escape from the Zebrama system. If I worked it out why can't you?

There is an excellent graphic display of the sail on the wonderful cover with excellent artwork that can be picked up. It



goes on top of the thing that Ms Edgeley (the insane) managed to pick up. It is actually displayed in your black and white photo!

And if you give junk like **Ballblazer** and **Kirel** 'Classics' you all need strait jackets.

James Baldock
Waterbeach
Cambridgeshire

Game's tape corrupting?

HAVING SEEN Gremlin's wish to be enlightened about the nature of **Raquel's Games** I feel I can help you.

Being of an obviously similar mind to yourself, I persuaded my wife to buy me a copy for my birthday. On loading the tape you are informed that it contains a total of four games, some of which are unsuitable for anyone under the age of eighteen to play.

Your appetite is whetted for the excitement to come with a two-part game called **Blaster Mind**. You start by playing mastermind followed by a version of **Space Invaders.** The second game is that encourager of vice and immorality **Buster** (or **Pontoon** as it is usually known). This is followed, if you are still up to it, by **Flash**. This

► 16

turns out to be nothing less than **Bomber**.

To settle you down, after the ecstasy of the foregoing you can finish by playing, with a friend of either sex, a game for two, **Connect Four**.

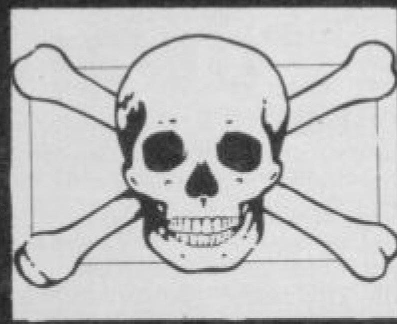
I am sure you will agree with me that this must be one of the most obscene tapes ever to have been offered to the paying public.

Mark Border
St Leonards-on-Sea
East Sussex

Software firms aiding piracy?

COMPUTER PRIATES copy software because it is getting more and more expensive to buy good computer games. I for one — and I'm sure I'm not alone — am not prepared to pay out £10 for a game.

Long John Silver (a pirate!)



CONTINUING the great software piracy debate, I just think it's obvious why piracy is rife.

For a decent game you can expect to pay around £9.95. Most people, particularly those at school, can't afford to pay out £10 a month let alone a week to buy their favourite games. The real reasons why software companies go bust is they price their games too high so not enough people will buy them; it's not piracy that kills them.

You don't have to charge £10 to be a successful company. This is proved by Mastertronic who only charge £1.99 for their games. They have 10 out of the 30 games in this month's Top 30: other software companies read and observe. The general public can't afford your games.

Robert Matthews
Huntingdon
Cambridgeshire

A case of the wrong border

I WAS IN my flat in North London when the telephone rang. I picked it up.

'London 975-64329. Hello, I said.

'Hello. Gareth here.' Said a voice which had a Scots accent. 'I want ye tae come tae Priory Court, 32 Farringdon Lane.' Said Gareth before hanging up.

Realising that Priory Court was far away, I went in the C5. I encountered some runners who had come 29 miles non-stop. They were faster than me.

Priory Court was the shabby offices of *C5 User* — a cheap



nasty mag. Gareth appeared and showed me the plans for the 50th issue. 'Ye see tae mark the 50th issue weer gain tae mak it shorter than usual, 98 pages in fact, hoots.'

Suddenly I heard a voice from the roof. It was Dumbo Scolding flying a microlite C5.

By the way I heard you're leaving. Aw!

End of Part 1.

Humf
Montrose
Scotland

● *Scolding had to get out of town. Things just got too hot. Gareth ain't no Scot and he's not pleased with Humf one little bit. Cymru am Byth!!*

And don't think we're hanging around waiting for Part 2 either.

Unemployed user group

MAY I THROUGH your magazine, inform all unemployed Spectrum users about a group exclusively for them. It is called, not surprisingly, the Spectrum Unemployed User Group (SUUG) and is non-profit making. All SUUG ask is that queries are accompanied by a SAE and a 5p piece to cover the cost of printer paper, electricity etc. All the various services are free.

SUUG offers advice with all of the problems the unemployed face. Help with any difficulties concerning the DHSS, discount on software and some peripherals a tape magazine and advice on computer related problems. To get a copy of the current issue of the SUUG tape mag, send a blank C60 cassette, for the magazine to be put on, together with a SAE to: Mr M Sleight, Spectrum Unemployed User Group, 109 The Avenue, Bentley, Doncaster, South Yorkshire DN5 OPS.

Mr D Gray
Huntingdon
Cambridgeshire

Fabulous cheque!

THERE IS just one word to describe Sinclair User; 'Supercalifragilisti-expeallydocious.'

It has everything a computer magazine should have. I am of course talking of your excellent reviews, brilliant Zapchat, and fabulous adventure reviews.

Craig Lovelace,
Garboldisham, nr Diss,
Norfolk IP22 2SD.

● *The cheque's in the post Craig!*

Facing up to faces

I RECENTLY purchased an Amstrad printer to use with my Sinclair Spectrum computer.

I use it with a Kempston Interface E.

Whilst I am very pleased with the standard letter print quality, I can't get the alternative typefaces to work using the instructions contained in the Amstrad maual.

Can anyone tell me what commands to use with the Sinclair Spectrum?

Stuart Lever,
Warrington

Sticking to print simple

IN MARCH, I bought a QL computer including Psion software (Version 2.3) at Dixons, and I also got a free printer (Serial 8056).

I'm very satisfied with the QL, but I have great problems getting my printer to work together with the **Quill** program.

Since I've no problem using the printer in my own programs I've come to the conclusion that the printer isn't properly installed (using the *Install-Bas* program).

Can anybody help me with the installing data?

Rune Søvik
5300 Kleppestø
Norway

Sweet FA — so Bourne to run

I READ your reviews of **FA Cup Football**, last month, with interest and increasing frustration. I respect that everyone has a point of view, and that opinion varies vastly from person to person. but what brought me to compalin was Mr Bourne's mis-reading of the instructions and lack of understanding of the game which he then used to slag off the game. Mr Bourne says that each player must pick eight teams: this is untrue — it is 10 — as the instructions clearly state.

It is obvious he went straight to the 3rd round (optional) and two of his teams were eliminated in the first two rounds which were not shown. This principal is also fully explained in the instructions. Still concerning the number of teams he says that with four players each would choose two teams. Again this is completely innaccurate as each player has 10 teams no matter how many there are, and it is in the merciless hands of fate to decide how many make it to the 3rd round if that option is



chosen. Mr Bourne also states he did not have the energy to load the game to check the number of teams, however if he had paid a fleeting glance at the instructions he would see that it tells you how many teams there are in total (124).

Not content at showing he has not read the instructions he continues by saying the game 'claims' to be an accurate representation of the real cup. Not only does it claim to be — but actually is and Mr Bourne proves this in his review where he mentions Liverpool and Everton reaching the final.

This game was, for me, one of the most addictive games released this year and I am neither bone-headed nor an Arsenal supporter as suggested.

Peter Whelerton
Normandy
Middlesborough
Cleveland

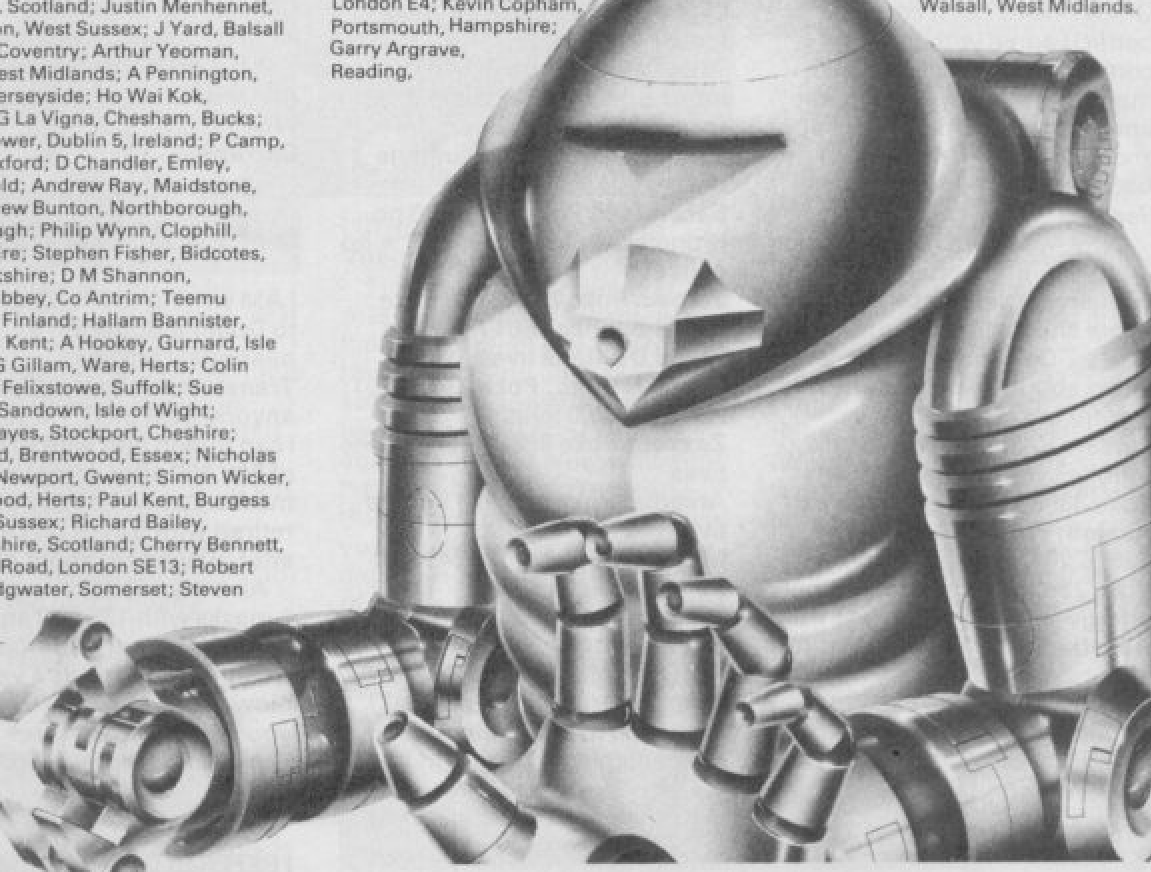
COMPETITION WINNERS

The winners of the 100 copies of **Quazatron** up for grabs in our competition in the May issue of *Sinclair User* have now been identified.

The correct solution involved finding Fantasia Diamond, 3D Lunattack, Paradroid, Di-Lithium Lift, Dragontorc, Avalon, 3D Seiddab Attack, Quest, Technician Ted, Heathrow ATC, Uridium and Nightflite hidden in the wordsquare.

Congratulations go to:

Shaun Moore, Plymouth, Devon; Simon Howard, Peace Haven, East Sussex; Winifred Machielse, Holland; Simon Caldercutt, Rochdale, Lancashire; B J Dickinson, Fife, Scotland; Matthew Cox, Norwich, Norfolk; Lee Hodgson, Tewkesbury, Gloucester; Darren Stanley, Worthing, West Sussex; Robert Matthews, Huntingdon, Cambs; Englebert Georges, Belgium; Philip Jackson, Great Barr, Birmingham; Edward Hunt, Aylesbury, Bucks; Matthew Stephen, Guernsey; R Goldsmith, Greenford, Middlesex; Chris Little, Slyne, Lancaster; Malcolm Whale, Merry Oaks, Durham City; John Phillips, Saltash, Cornwall; Roger Hook, Crawley, Sussex; Christopher Groves, Eastfield, Scarborough; R Barker, Newark, Notts; M Dodd, Edgware, Middx; Darren Ludlam, Burton, Lancs; Caroline Gregorick, Sutton-on-Trent, Notts; Alan Taylor, Orpington, Kent; Jeremy Johnson, Burford, Oxfordshire; Robert Gallop, Ryde, Isle of Wight; Andrew Backhurst, Ipswich, Suffolk; David Hodgson, Shildon, County Durham; Leigh Holmes, Mountsorrel, Leicester; Royd Longmire, Bispham, Blackpool; J Cope, Birchfield, Birmingham; Peter Baker, Maidstone, Kent; E Goodman, Barnsley, South Yorkshire; John Bunney, Amersham, Bucks; I Cole, Methley, Leeds; M Bridges, Sittingbourne, Kent; S Miles, Wallasey, Wirral; Jamieson Cole, Flitwick, Bedfordshire; Sean Kelly, Woodthorpe, Nottingham; Geoffrey Herbert, Malvern Link, Worcs; Roderick, MacLean, Ross-shire, Scotland; Justin Menhennet, East Preston, West Sussex; J Yard, Balsall Common, Coventry; Arthur Yeoman, Walsall, West Midlands; A Pennington, Huyton, Merseyside; Ho Wai Kok, Malaysia; G La Vigna, Chesham, Bucks; Michael Power, Dublin 5, Ireland; P Camp, Cowley, Oxford; D Chandler, Emley, Huddersfield; Andrew Ray, Maidstone, Kent; Andrew Bunton, Northborough, Peterborough; Philip Wynn, Clophill, Bedfordshire; Stephen Fisher, Bidcotes, South Yorkshire; D M Shannon, Newtownabbey, Co Antrim; Teemu Hokkanen, Finland; Hallam Bannister, Orpington, Kent; A Hookey, Gurnard, Isle of Wight; G Gillam, Ware, Herts; Colin Haughton, Felixstowe, Suffolk; Sue Hanmore, Sandown, Isle of Wight; Stephen Hayes, Stockport, Cheshire; Robert Reid, Brentwood, Essex; Nicholas Methuen, Newport, Gwent; Simon Wicker, Borhamwood, Herts; Paul Kent, Burgess Hill, West Sussex; Richard Bailey, Aberdeenshire, Scotland; Cherry Bennett, Lewisham Road, London SE13; Robert Smith, Bridgwater, Somerset; Steven Jones, Morriston, Swansea; Keith Hamilton, Clarkston, Glasgow; Steve Edwards, Swinton, Manchester; Sheldon Smith, Lowestoft, Suffolk; I Smith, Spalding, South Lincs; David Gardiner, Coulsdon, Surrey; Robert Hambleton, Stockport, Cheshire; David James, St Helens, Merseyside; Andrew Edney, Pimlico, London SW1; D McVey, Rutland, Leicester; Simon Howden, Mablethorpe, Lincs; Ian Skerritt, Preston, Lancs; Timothy Reed, Eastleigh, Hants; Simon Stevens, Dunstable, Beds; C Man, London WC2; Robert Shepherd, Highams Park, London E4; Kevin Copham, Portsmouth, Hampshire; Garry Argrave, Reading, Berks; Paul Morrison, St Anns, Nottingham; Andrew Cooper, Bransholme, Hull; Mark Finn, Askern, Doncaster; Russell Wark, South Croydon, Surrey; C Harvey, Cramlington, Northumberland; Steven Poole, Battersea London SW11; Matthew Parker, Hodge Hill, Birmingham; Brian Quilter, Victoria, London SW1; Robert David, South Norwood, London SE25; Philip Aldis, Catford, London SE6; Shashy Dass, Hailsham, East Sussex; Roger Johnson, Doncaster, South Yorkshire; M Wright, Walsall, West Midlands.



Zapchat

Keep those tips, hints and Pokes rolling in!

Infinite Lives

GREAT MAG but it could be better. I agree with those comments made about your magazine looking like a comic and suggest people do as I do and hide it in their jackets or between the covers of the *Beano*.

Why — in the *Zapchat* section — do you print letters that contain the same useless tips as those shown in previous issues? Does no one out there know about *Poke* ing games?

Here are a few:

Finders Keepers: Poke 34252,0 infinite lives or Poke 30394,N: Poke 33969,0 (N = no of lives)
Avalon: Poke 23782,2: Poke 23876,201: Poke 23878,204: Poke 23879,227: Goto 0 infinite energy
Adastra: Poke 35853,0 infinite lives
Hunchback: Poke 26888,0 infinite lives
Manic Miner: Add line 25 Poke 24289,20 or 25 Poke 35136,0 (lives)
Attic Attack: Poke 36519,0 infinite lives, Poke 35353,0 infinite energy
Zzoom: Poke 24743,0 infinite energy
Sabrewulf: Poke 39702,30 no monsters Poke 43575,N (N = no of lives)
Jetpac: Poke 25015,62: Poke 25016,5: poke 25017,0: Poke 25018,0 infinite lives
Lunar Jetman: Poke 23439,201: Poke 36965,0 lives
Zaxxon: Poke 48825,255 infinite lives
Arcadia: Poke 25776,0 infinite lives
Mutant Monty: Poke 54959,0 infinite lives

K Savage
Sheffield

PS. Can someone give me a *Poke* for **Dragontorc** please? I managed to complete **Avalon**, but can't get anywhere in it.

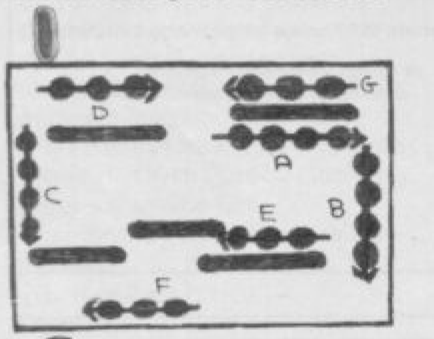
Bombjack

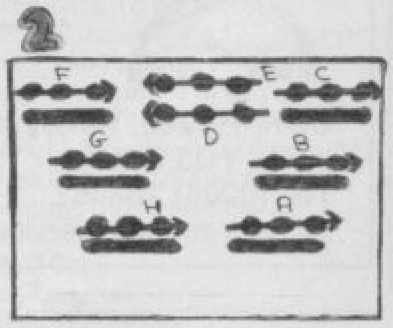
On **Bombjack**, I've now got a score of 509,880.

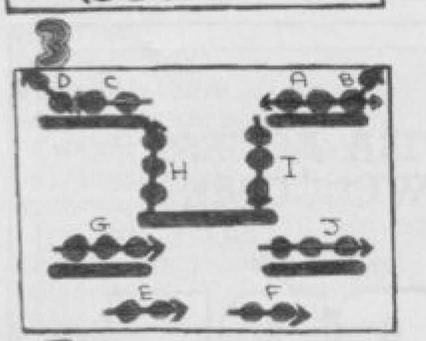
Your best chance is to get a bonus of 50,000 on the first 5 or 6 screens by collecting 23 sparkling bombs. Don't try and get all the bodies after getting a power ball. There are not many Extra Life coins but get the ones you can. On the later stages it is better not to go for bonuses as you will increase the risk of getting caught out.

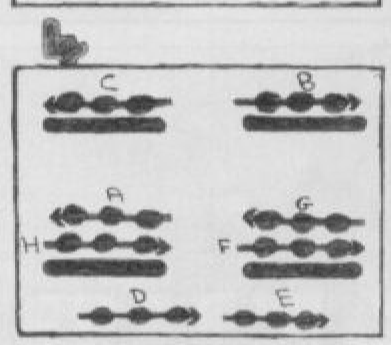
Try for all the bonus coins you can as they help you get a high score. I can't seem to find an S ball on any of my attempts, though. Can anyone help me?

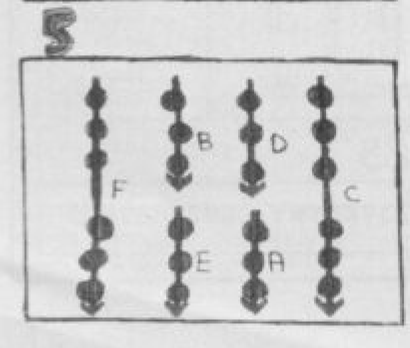
Daryl Butterworth
Bury
Lancs











HERE ARE some hints for **Bomb Jack** by Elite. Just follow the arrows A.B.C. etc and you'll get all of the bombs with the fuses lit and you will get a bonus of 50,000 per screen.

Alan Walton
Blackburn
Lancs

Nonterra

CAN ANYONE give me a *Poke* so that I can have more than one life on **Nonterraqueous?**

Ali Quizilbash
Woking
Surrey

Transformers

I AM writing to Zap Chat in reply to Duanne Butterton's hilariously terrible **Transformers** score. 'Can anyone beat this?' He said. Well I can thrash him with my score of 263,350 after completing 9 masks. But without dying. I retired with 5 lives on Level 10 after playing for about an hour.

Also my friend can complete 5 masks with 135,070 and he hasn't even got a computer so, Duanne, take this as a very big blow and don't write in with your weedy little scores again.

Gary L and Andrew Birch
Penn
Wolverhampton

I REFER to Duanne Batterton's letter in the May issue regarding his score on **Transformers**. I write to let you know that after 2½ hours, having reached a score of 339,160 and having completed nine masks I gave up.

Kevin Wilkie
Baibeggie
Scotland

I HAVE discovered an amazing bug in Ocean's **Transformers**. It works with all of the robots:

Optimus Prime: Walk off the edge to your left. Keep going left and walk off the next edge you come to. Fly left between the two floors directly opposite. When the top floor ends fly up a little and land on the floor to your left. Transform to the vehicle and go left. There should be a slope. Drive up that and the vehicle will fly.

Mirage: Keep going left until the platform ends. Now follow the instructions for Optimus Prime from the beginning.

Hound and *Bumblebee*: Keep going left. When you've gone up two slopes follow the instructions for Optimus Prime from the second command.

Jazz: Keep going left until you've gone down a slope then up a slope. Go down the first ladder you come to, this should go down and right. Now follow the instructions for Optimus Prime from the beginning.

John Patmore
Liss
Hants

Max Headroom

I CLAIM to be the first person to complete **Max Headroom!** It took me a few weeks to work out how to solve it — and here are some tips for finishing the game.

To start with, enter *E* into the left call code. When you reach level 200 proceed to the other lift where you can enter the lift call code *P*. When the lift arrives at this level select the Board of Directors. For each director you will need to enter a code:

Peter Harrison: AO
James Boguley: DC
John Pickford: 41
Paul Ranson: 28

Once through this security check search this floor for the



Presentential code. When found enter a lift and type in *L*. You will need to enter the Presidential code belonging to President Grossmer on arriving at this floor. Remember to select the President first or the lift will go berserk! Then search this floor for Max Headroom. When found orders are given to proceed to a lift. The lift takes you to the ground floor and the game is complete. There is now a personal congratulation from Max on the other side of the tape.

Adam Robson
Nr Royston
Herts

Wheelie

HERE ARE some pokes for infinite lifes on **Wheelie.**

```
5 PRINT at 0,0; "play wheelie
tape from start"
10 LET c = 0: FOR a = 23296 to
23340 READ b: poke a,b; LET c
= c + b: NEXT a
20 IF c <> 4514 THEN PRINT
"error in data": STOP
30 RANDOMISE USR 23300
40 DATA 175, 50, 21, 91, 0, 0
50 DATA 221, 33, 111, 63, 17,
145, 27
60 DATA 62, 255, 55, 205, 86, 5,
48, 234
70 DATA 221, 33, 108, 98, 17,
125, 152
80 DATA 62, 255, 55, 205, 86, 5,
48, 242
90 DATA 62, 201, 50, 85, 117,
195, 30, 109
```

Darren Beals
Witney
Oxon

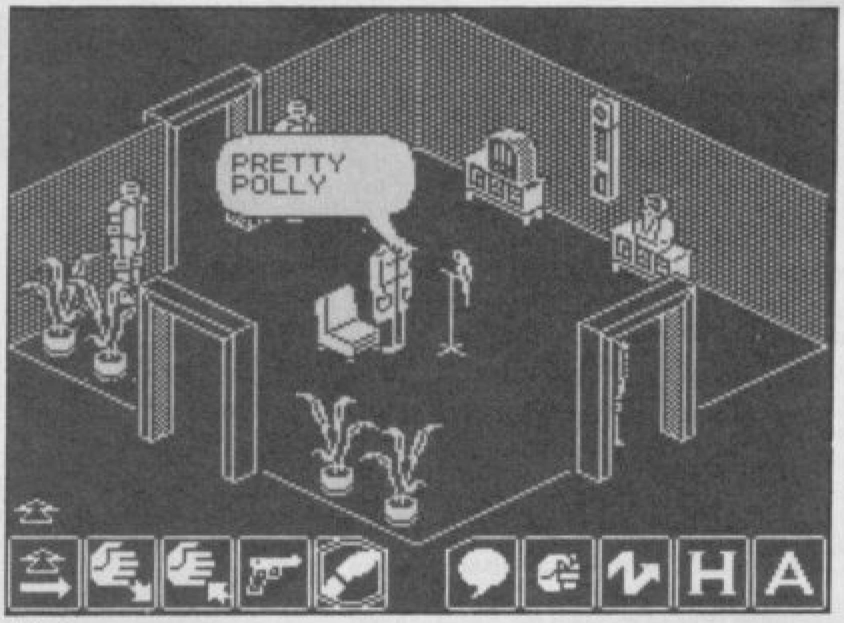
Movie

I HAVE just bought Imagine's new game **Movie** and have noticed a bug. If you go right up to a person and shoot him in the stomach your last speech comes up and you can't use that gun again.
Andrew Calder
Wembley
Middx

IN ADDITION to Craig Lovelace's letter, (*Zap Chat* June), concerning a bug he had found in Imagine's excellent game **Movie**, I have discovered two more bugs in the game.

The first bug I have encountered several time when entering rooms. This bug suddenly transforms you into a large grandfather clock and after certain periods of time changes you from this back to the detective, all control of the game is lost as your instructions are ignored and it is necessary to reset the computer as *Abort* does not function.

I encountered the second bug when entering a room where a bottle falls from the ceiling on to a table. After attempting to kill the gangster in this room your character punches continuously and when he walks his feet do not move, as if he is wearing roller skates. In addition to this, when you move in certain directions a large amount of complete rubbish is printed over and above you as you walk and when moving left, your character oscillates between the detective and the girl. After wandering around for a while the game finally crashed.
Russell Nash
Cheshunt
Herts



I'VE DISCOVERED a bug in Imagine's **Movie.**

First collect your gun then make your way to the music hall, go through any one of the three doors and walk southwards, towards the baddy. Stand with your back against the wall. Now wait until he starts thumping and as he thumps you, fire your gun. Now you should see as you walk the detective flickers to the image of Tanya and leaves behind him a big blur.
Stewart Davies
Sealand
Clywd

Id

BEING a loyal Pimanic I have completed 'Id', not only did I get 99%, but also have found out all the thngs Id once was.

Here is what Id was — you have to find out what Id will be!

Id was: the domesday machine; the stone the 10 commandments were written on; the fruit of the tree of knowledge; the sword exacalibar; a musical pipe; a bullet; a straw; the cross on which Jesus was nailed; and a pair of spectacles.

For all the people who are having problems here are some clues and general help.

Words you can teach Id are Truth, Trust, Person, Alien life, Love, Hate, Clue, Peace, Human, Animal, a Period (of time), a Star, Faith, Messiah, Moron, Birth, Game, Joke, Song, Hope, Planet, Universe and Imbecile.

Act an intellectual! I must congratulate Mel, Colin, CRL, and Nu-wave on producing such an excellent game.
Graham (a Pimaniac)
Horspath
Oxford

Fairlight

FAIRLIGHT: The solution.

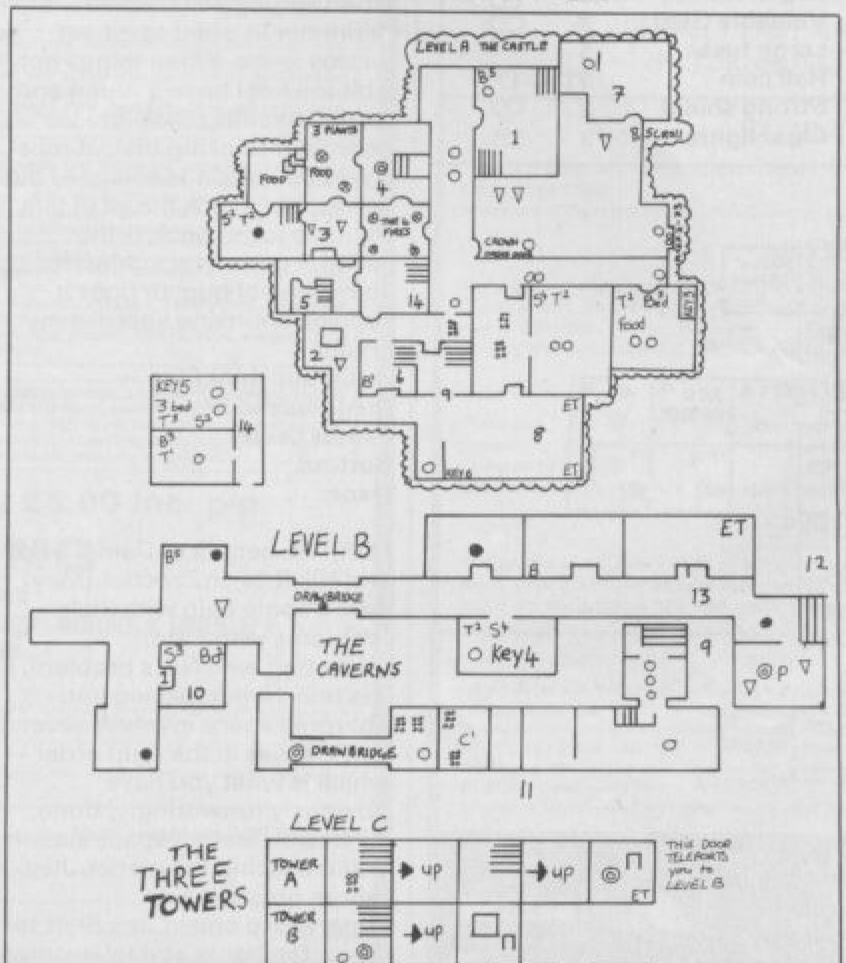
Part A: Pick up the Scroll. Stack things under the archway with the crown on top. Take the crown and journey down to the caverns.

Part B: Put the crown on view and search the walls until you find yourself in a tomb. Slide off the body and then the right-hand slab and fall down into another tomb. Pick up the Book of Light. Use the scroll to return to the courtyard.

Part C: Get the cross by pushing off one of the panels on the throne in the chequered room with the wraith in. Stack the Book of Light, the cross and the crown in a safe place. Push things under the ledge in another chequered room to reveal a potion. Take this plus the Book, the cross and the crown. Come out of the chequered rooms to a hall facing the big door with the suits of armour on either side. Go east down this corridor, defeat the guard. Go through this door. Go down quickly to the bottom of the room. Go out, follow the path round until you come to the guard walking by the key. Kill him, get the key and go through the door on this screen.

Part D: Go up the steps. If you are in the right position you can jump through the wraith guarding the door. The best way to do this is stand on the floor the closest you can get to the steps, move forward and jump. Go up the next steps, kill the wraith with the cross, go through the door, kill the next wraith with the potion. Go back down the steps and down again until you get to the floor with the barrel and the jug. Take the barrel, go all the way up the steps again until you are in the room of the two guards. Kill them. Go up the steps. Put the barrel in the corner. Drop the crown beside the barrel. Make sure the book is on view then jump up into the wizards room. Get the key, drop the book and fall back down into the room below.

You are now free to leave by the main gate.
Martin Booker
Lake
Isle-of-Wight



Notes on map

1. Steps doen to Level B
2. Don't go under this — it's a trap and you'll fall down a well and have to restart
3. A concealed potion lies under this ledge. Push it out with objects from another room
4. Here lies a concealed cross
5. The base of Tower B
6. The base of Tower C
7. The base of Tower A
8. Man-eating plants — stay away, very dangerous
9. The link between Level A and Level B
10. The Book of Light is under this room. Collect it, then use the scroll to return to the courtyard
11. You can walk through this wall to the opposite room
12. These are the steps that lead down from Level A
13. There are two empty helmets here, but they never change into guards
14. The stairs link to the two separate rooms

Key

Stool	S
Table	T
Barrel	B
Book	Bo
Egg timer	ET
Potion	P
Cross	C
Gourd	O
Giant	●
Wraith	◎
Bubble	°°°
Whirlwind	▽
Archway	∩

ZAPCHAT

Spitfire 40

WOULD YOU like the perfect hint for Spitfire 40? I was awarded a DFC, with 15 victories within 1 hour. Hear these and shoot down the ME109 (or maybe HE111).

To avoid the enemy on your tail and turn the tables to place yourself behind him (as soon as he appears on the mirror). Press keys *A* and *Z* together with *L* so as to make a hard left turn. Keeping a course on the circumference of a circle that will keep you out of the enemy gunsight due to pitch cased by *L* acting as centripetal force. The horizon will become vertical and just stay there correcting with *S* and *X*.

If you have fixed your heading before your turn, coming round to the same course again, get level coming out of the turn, and stand-by for the enemy to appear, usually, at top right of the screen. Move keys *A,S,K,L,P* towards the position of the enemy and place him slightly left of your gunsight. Shoot when he is close.

Now here's the real trick. The Spitfire will land anywhere! Yes, just follow roughly a course leading towards the end of the runway, or any other place. Come down initially steeply, say at a rate of descent of 400 feet per minute. Approaching 1,000 feet come level using *L,P* until the elevator position indicator shows 0. Then change to lower gear and just cut down the RPM with *W* so as to achieve a rate of descent of only 500 feet per minute. (Between 0 and 1). If you are steady on 500 feet per minute you will land no matter where. Then just use *Z,X* with slight pressure so as to turn taxiing on the ground, when approaching the runway slow down and move on to it smoothly. Use brakes and halt. Do you get a score table? If not, release brakes move a bit further keeping your heading between 0 and 180 degrees. When your score appears, save it and, Take off again.

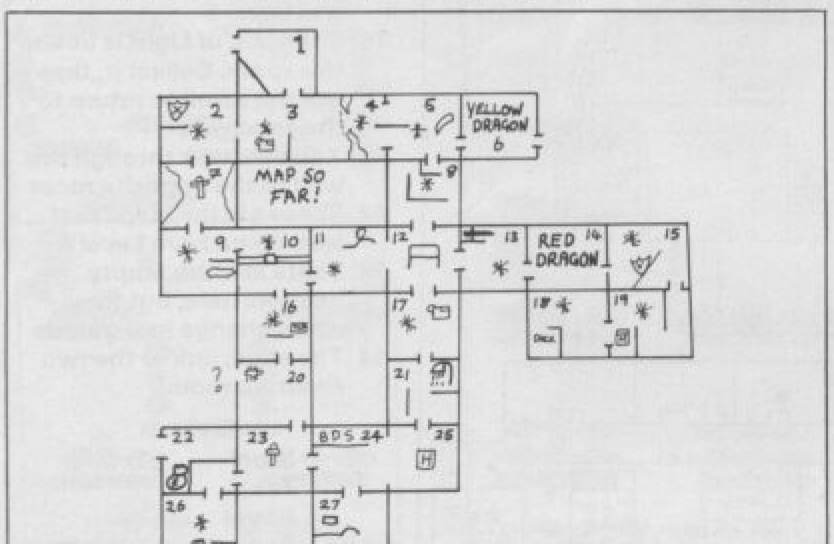
John Mornselas
Athens
Greece

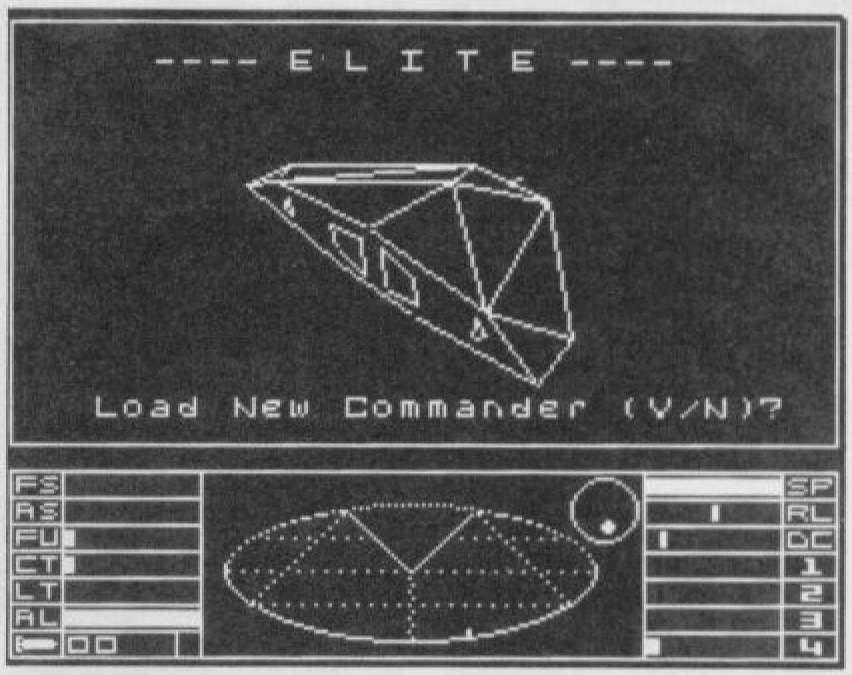


Sweevo's World

Key

Object	Room	Object	Room
Sharp sword	13	Bag of money	22,26
Soft pillow	27	Valuable Gem	9
Mouth wash	16	Large tusk	5
		Half coin	11
		Strong shield	2
		Cigar lighter	3





Elite

I RECENTLY bought *Elite* (3 days, 1 hour, 17 minutes and 52 seconds ago, actually) and after exactly 36 hours playing time I have decided that it is jolly good and that I am probably an addict.

Unfortunately, I've had a few problems.

(a) Everyone's favourite: docking.

(b) Survival: it has taken me 36 hours to make a profit of 12.5 credits (and that was from narcotics — I got plastered all over every time I tried to trade in anything elese).

(c) Giving my combat status a boost: So far I've attacked a Fer-de-Lance, a boa, three mamba's, half-a-dozen asteroids, a whole bunch of vipers, and even a space-station. I'm a 'fugitive' now but I'm still 'harmless'!

(d) Space station security perimeters: as a bounty-hunter, I tried edging just outside the perimeter in order to attract pirates to me. When things got a bit too hot I turned round and started heading back into the perimeter thinking that, at most, it was ten-seconds away — I did surive, but it took me all of five minutes to get back. Is the security perimeter subject to some kind of bug, or does it keep on shrinking, just like my credits?

(e) I still think *Elite* is mega-incredible!

James Lewis
Burford
Oxon

FOR THE benefit of Daniel Baker and Nik Rice, in *Zapchat* (May) here's some help with their problems with **Elite**.

Starting with Nik's problem, if it is one. Hyperspacing into Thargoid space involves several key-presses in the right order — which is what you have obviously (unwittingly) done. When you leave a space station you are facing the planet. Just before pressing *H* to hyperspace press *Caps Shift* to freeze the game and follow that up with *F* (press only once). Unfreeze the game (*Space*) and *H* hyperspace to the planet of your choice. Half-way through you will stop and be attacked by anything up to half a dozen Thargoids. If you *H* again, without cancelling the procedure (the exact reverse) then you'll arrive again in Thargoid Space and be attacked by even more Thargoids. You cannot get in 'Witch Space' without doing the above sequence of key presses, although you may meet the odd Thargoid on your travels.

Daniel Baker's problem is that he hasn't read the Space Trader's Flight Training Manual. On Page 7 in black and white are the full instructions for saving the position without having to to go the beginning each time you pull the plug.

In Witch Space the easiest way of killing the thargoid ships is to become invisible, using the cloaking device. You can get this after being attacked and 'despatching' a minimum of 4 Asps. Don't worry if you can't get it first time around as they keep on coming for you each trip you make, until you get it. A useful tip is to keep the Energy Bomb until you are down to your last half bar of energy. In most cases the 4 Asps will return again if you are a long way from a Planet, so you'll need your rockets for them.

Another money-saving and useful tip that'll give you combat experience is to line up your sight at half speed. when lock-on occurs do not fire your rockets but instead use laser power. In most cases you can kill before it passes over you (to shoot at your rear). This works for ones, twos, or even threes (and if you're brill four or fives). If it does get behind you stop, and do not follow, or else you'll be drawn further away from the planet than you already are.

Andy Wright (Elite)
Troubridge
Wilts



O'LEVELS

not just revision but also tuition for the Spectrum 48K/128K

Mathematics 8 programs TOTAL 150K	Fractions, square roots, decimals, logarithms, areas, sets, accuracy, bases, interest, volumes, indices, standard form, modulo, number set, pie charts, histograms, simultaneous equations, bar charts, averages, probability, algebraic laws, quadratics, matrices, vectors, transformational geometry, trigometry, differentiation, integration, factors, angles.
Physics 7 programs TOTAL 140K	Reflection, wavelength and frequency, refraction, lenses, the eye and its defects, diffraction, colour, magnetism, motors, Ohm's law, amps, volts, series, parallel, electronics, heat, gas laws, energy forms, specific heat, kinetic energy, half-lives, atomic structure, radiation, isotopes, Newton's laws.
Electronics 8 programs TOTAL 150K	Energy and its sources, power distribution, e.m.f. p.d., charge, current power, r.m.s. values, resistors, series and parallel, capacitors, time constants, inductors, transformers, resonance, microphones, loudspeakers, heat and light sensitive devices, diodes transistors, logic circuits, multivibrators, meters, CRO, amplifiers, feedback.
Computer Studies 7 programs TOTAL 140K	Data collection, coding, storage, processing, presentation, validation, d.p. systems, privacy, security, hardware, I/O devices, software, low and high level languages, machine-code, assemblers, interpreters, compilers, errors in programming, aids to debugging, microcode, machine organisation.

each subject only £5.00 inc. p/p

GCE TUTORING

quality educational software

HILLSIDE, KIRSTEAD, NORWICH, NORFOLK NR15 1EB
(0508) 50624

Please send me: ....

My computer is a: ....

I enclose a cheque/PO for £ .... Made payable to GCE Tutoring

My name and address is: ....

.... SU/7/86

SPEEDYSOFT

01-846 9353 (24 HRS)

ALL ORDERS NORMALLY DESPATCHED THE SAME DAY WE RECEIVE THEM

KEMPSTON MOUSE 48/128.

The Yorkie bar of mice: solid, chunky and very, very smooth." (Your Sinclair 06/86)
Clever Kempston mouse works on 48K and on 128K Spectrums and you get "The Art Studio" program free. (Kempston) £69.95

BATMAN

"Truly excellent game ... colourful, fun-packed arcade adventure ... destined to become an all-time classic ... the Batman character is just perfect." (Computer & Video Games 05/86)
Spectrum 48/Spectrum 128. (Ocean) Cassette £7.95

MICRODRIVER Mk 2

PUSH-BUTTON TAPE/MICRODRIVE TRANSFER.
"If you have a Microdrive, the microdriver is the most important piece of hardware you could buy." (Sinclair User 11/85)
"Using the microdriver is a dream ... the device is a must for the serious microdriver." (Crash! 11/85)
Spectrum 48. NOT 128. (Mirage) ROM add-on £39.95

FOUR ADVENTURES

"EXCEEDINGLY GOOD VALUE FOR MONEY." (Crash! 04/86)
Out of the Shadows by Mizar. The Case of the Obscene Mural by Nic Ford. The Microman by T. Kemp. Galaxies by Fergus McNeil. 4 adventures on one tape. Spectrum 48/Spectrum 128. Cassette £7.95

"THE FASTEST SOFTWARE SERVICE IN THE WORLD"
(P. SZETO, WALES)

MUSIC BOX

"Anyone who has forked out for a 128K and does not buy this program is missing out on one of the most entertaining aspects of computing." (Sinclair User 05/86)
Spectrum 48/Enhanced Spectrum 128 version on side 2. Cassette £9.95

WAY OF THE TIGER

"Takes a step beyond the standard fight games. The figures are also realized with an acute eye for detail and being both large and smoothly animated look set to give the combat fanatic a real challenge." (ZX Computing 05/86)
Spectrum 48/NOT 128. (Gremlin) 2 Cassettes £9.95

PING PONG

"A really great game ... I really couldn't believe that a humble BEEPY Spectrum was delivering such impressive music." (Crash! 05/86) "Great fun to play ... an excellent simulation." (Computer & Video Games 05/86)
Spectrum 48/Spectrum 128. (Imagine) Cassette £7.95

QUAZATRON

"Remember 'Paranoid', the stunning original arcade game? ... Well, this is better ... Once again, Hewson have set the standard that others must follow." (Your Computer 05/86)
Spectrum 48/Spectrum 128. (Hewson) Cassette £8.95

"EXTREMELY FAST AND RELIABLE SERVICE"
(P. TURNBULL, NEW ZEALAND)

FALKLANDS 82

"This will keep fans of the wargame happy for hours – it beat me on the simplest level." (ZX Computing 05/86)
Spectrum 48/Spectrum 128. (PSS) Cassette £7.95

AUSTERLITZ

The wargame companion to 'Waterloo'. You are Napoleon. You have 6 'intelligent' Corps Commanders. The computer varies both strategy and tactics to ensure that each game you play is different.
Spectrum 48/Spectrum 128. (Lothlorien) Cassette £9.95

TASWORD 3

"Tasword 3 can rival any word processor and with it the Spectrum is a serious word processing machine. It is difficult to see where further improvements could be made." (ZX Computing 04/86)
Spectrum 48/Spectrum 128. Microdrive cartridge only: £16.50.

SPINDIZZY

Will appeal to all games buffs of all types, action, strategy, platforms, map-making. It's all there. Even adventure gamers may give it a quick sneer." (Computer Gamer 04/86)
Spectrum 48/Spectrum 128. (Electronic Dreams) Cassette £9.95.

HOW TO ORDER

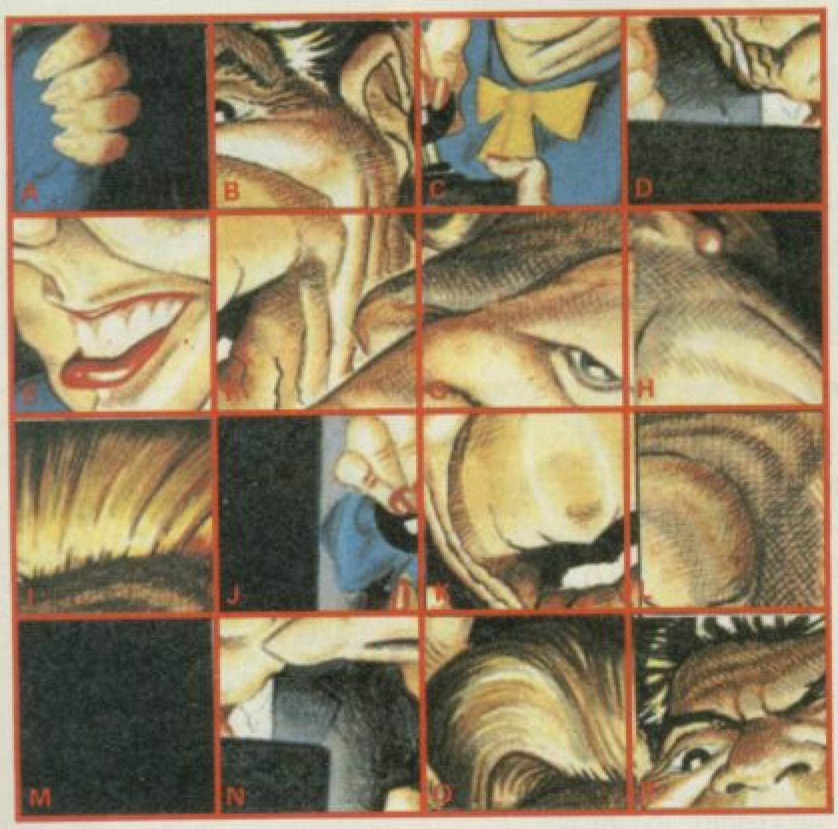
UK prices include VAT. Export prices are the same, because of the extra work involved. Remember to add postage & packing: UK £1 per order: Europe £1.50 per program: Outside Europe £2.00 per program. Satisfied customers in 64 countries. To order quote reference 'SU44'.
BY PHONE: Call 01-846 9353 at any time, 24 hrs a day. Leave your name, address, phone no;, order, credit card type, expiry date, card number, quote reference 'SU44'.
BY POST: Send your order to SPEEDYSOFT, 37 Church Road, London SW13 9HQ. Make cheque/PO payable to Speedysoft. Don't forget to add p&p. Quote reference 'SU44'. All orders must be prepaid.

ACCESS
VISA
EUROCARD
MASTERCARD

Sinclair User
COMPETITION

Splitting Image

the only computer game in which Margaret Thatcher goes to pieces and Ronnie Reagan is put in the picture . . .





Shy, retiring Domark present the best sliding-puzzle-game-featuring-international-celebrities-with-a name-that-sounds-like a-satirical- TV-program you've ever seen.

The promise

Sinclair User, in conjunction with Domark, will supply the lucky winners of this promotional exercise — um competition — with probably the largest number of prizes ever offered in any competition anywhere, ever*. Well, probably.

Prizes

Ten awesomely wonderful video digitisers which sit smugly in the back of your Spectrum and turn TV and video images into a beautifully shaded dot-matrix print — with a little programming you could have poster-sized portraits of the entire *Breakfast Time* team all over your walls. You'd need a lot of paper though, (yes and its probably illegal or something so don't mention it any more, Ed). Each one costs £69 to ordinary people — so that means we're (Domark actually, it doesn't cost us anything) giving away £587.37 worth of prizes. No it doesn't, hang on, £690 worth of prizes.

But that's not all!

For the people who don't really win but who we feel sorry for, or write their names particularly neatly there are hundreds of runners up prizes of a fabulous **Splitting Images** poster. Honestly it really is fabulous. Really. We have 500 of these to give away. (Actually there may be a few missing since everyone on the magazine wants one, and their immediate family, and a few other people we owe money to.)

Name ....

Address ....

....

....

....

What you have to do to win

Study the picture above. Mixed up isn't it? Your task is to reassemble the mixed up bits into a single instantly recognisable portrait. Each piece has a letter on it — simply fill in the grid on the competition form with the correct letters in the correct positions to complete the unscrambled picture.
Send your completed entry form to 'Splitting Images Compo', Sinclair User, 30-32 Farringdon Lane, London EC1R 3AU, to reach us by not later than July 18 (this year).

*** Honest Ron's bureau of auditted competition circulations and double-glazing company. EMAP and Domark employees unfortunately (though they may wish otherwise) cannot enter the compo.**



WORLD CUP FIFA!

Clare Edgeley knocks out US Gold's latest in the first round

With football madness rising to fever pitch, US Gold has launched **World Cup Carnival** — the official world cup game.

And it's awful.

Bleep. Action. And Robson flickers wildly up the pitch, dribbling the ball before him. A fumbling pass and he's intercepted. But by whom? Which team? The game suffers from excrutiating colour clash. Where the ball once was is now a large squiggly blob of cyan and white. Eventually it turns into Hoddle — cyan because he's controlling the ball, Pasarella — black for the opposing team, and Lineker — white and representing your team. When those three colours get together definition flies out of the window and identification is impossible. The best you can do is twiddle your joystick and hope the mess will sort itself out.

On they dribble. **World Cup Carnival** is played as a five-aside. It's just as well really because the pitch is minute.

In fact the football part of **World Cup Carnival** is no more and no less than Artic's ancient **World Cup** — a game which did well enough in its time — almost two years ago — but compared with current techniques in programming the graphics and scrolling routines are straight out of the ark.

This is mutton dressed as lamb. The mutton being Artic's original and the lamb being a few frills US Gold has added to persuade you you're getting your money's worth. There are three new practice modes which, in my opinion, are more exciting than the game. Taking and saving penalties, practising ball control and a training mode. Taking a penalty is played in **Daley's Decathlon** style — to gain speed while



◀ See the tiny stick insects make their flickery way toward the goal ● The Blue figure means you're in control





ARCADE REVIEW

running up to the ball, pump your joystick back and forth rapidly. Then press fire and tilt the joystick in the direction the ball is to travel. It's very difficult getting past the goalie who seems to have ESP. The graphics are better than the game proper and the simulation of running is quite realistic. Almost average anyway.

Saving penalties is tedious. Once your opponent has kicked the ball you dive in one of seven directions to save it. Ball control



▲ **Part of the promotional dressing up — a map of the world cup cities**

is a little competition to see how long you can keep the ball in the air by a variety of kicks and headers and is very boring. The training mode takes you back to Artic's original graphics and is a total let down.

Once I'd tidied up on my footie skills I decided to put them into practise. I anticipated being almost enthusiastic, I particularly wanted to test the penalty practise mode. Accordingly, I tried barging, tripping, kicking, but to no avail. Goal kicks were the only result meaning that all those semi-exciting practise modes are a complete waste of time.

You'll get more excitement out of watching the *World Cup* on TV than in wasting your time with this hurriedly cobbled together mish-mash of a game. And the posters, stickers, charts and badge which comes with the package in no way make up for the game's obvious shortcomings.

Incidentally, the Artic original is currently being sold to the trade at 65p so it should be out by now at budget prices.

FACTS BOX

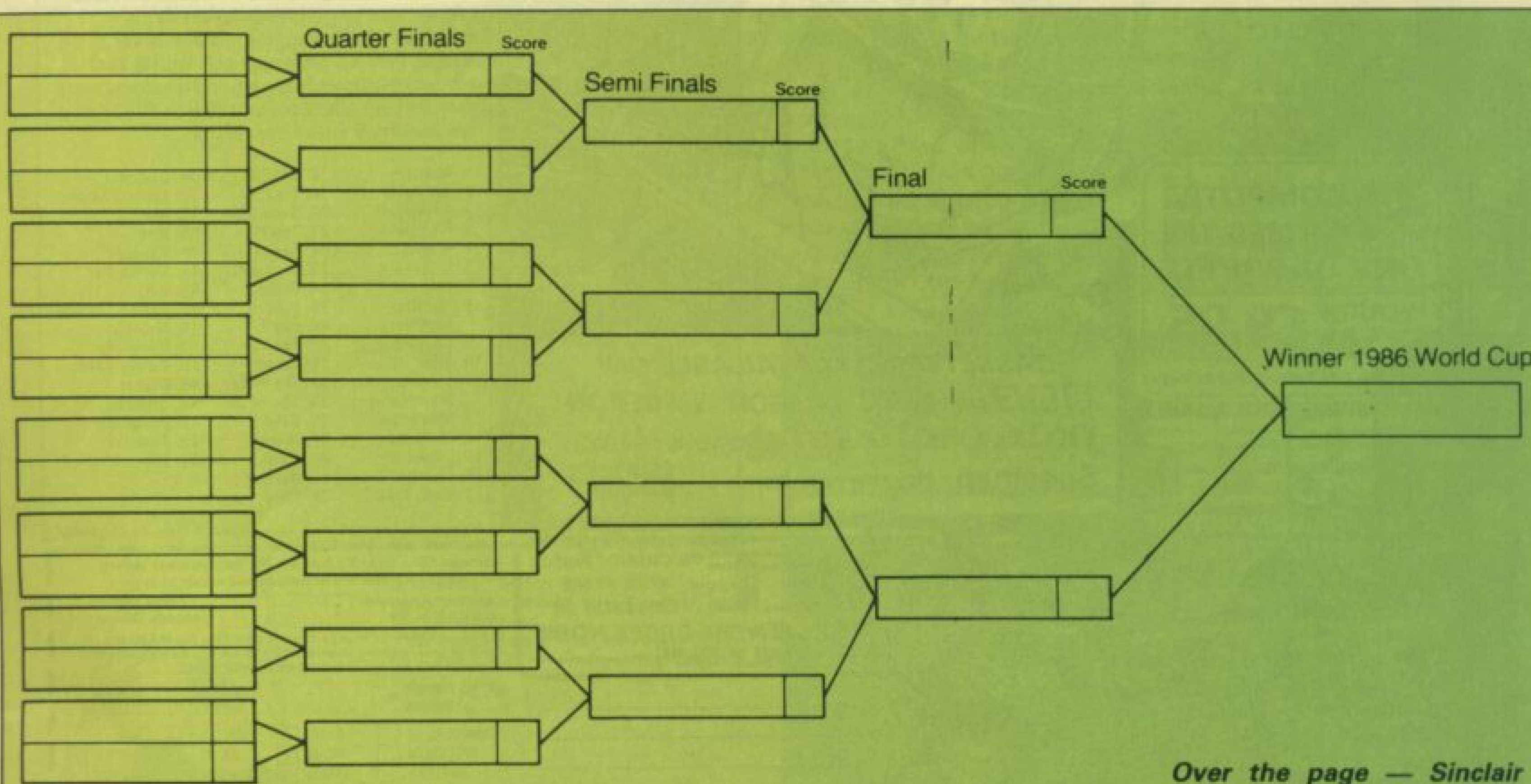
The graphics are so bad, they're funny. Takes the trophy from Superman as easily the worst tie-up yet

★★★★★ (one of five stars filled)

WORLD CUP CARNIVAL
Label: US Gold
Author: A S Designs
Price: £9.95
Memory: 48K
Joystick: Various
Reviewer: Clare Edgeley



▲ **Play penalties with bigger sprites but watch for the goalie with ESP**



▲ *Keep your own record of the World Cup results with Sinclair User's scorechart above*

Over the page — Sinclair User's selection of the top three micro football games ▶

ON THE BALL

ARCADE REVIEW





FOOTBALL MANAGER

Kevin Toms' classic game that has, in many respects, evolved little since inaugurated on the ZX81. Not that the technical details of programming matter though, because the elements that make the game great have little to do with the frontiers of computer science and a lot to do with quality of playing design.

Forget high-res graphics and smooth animation, all you'll get here are jerky figures. But no matter, you'll find yourself rooting for your stick figures over the opposition — all the usual criteria are abandoned with **Football Manager**.

The game is, as the name implies, one of planning and strategy. As the manager of a team (or teams) you must decide how best to allot time and money to build up the best team you can. Should you spend a lot of money on a good player, or take your chances with an untested novice who may perhaps become a champion? What formation should you play? Which defenders will you select?

The outcome of the matches your team plays depends (with a little random elements) on the decisions you make. Having made your choices you can only sit nervously on the sidelines as the Spectrum replays the key goals of the match. Try pointing out the technical deficiencies of **Football Manager** whose home grown team is 2-1 up in the final . . .

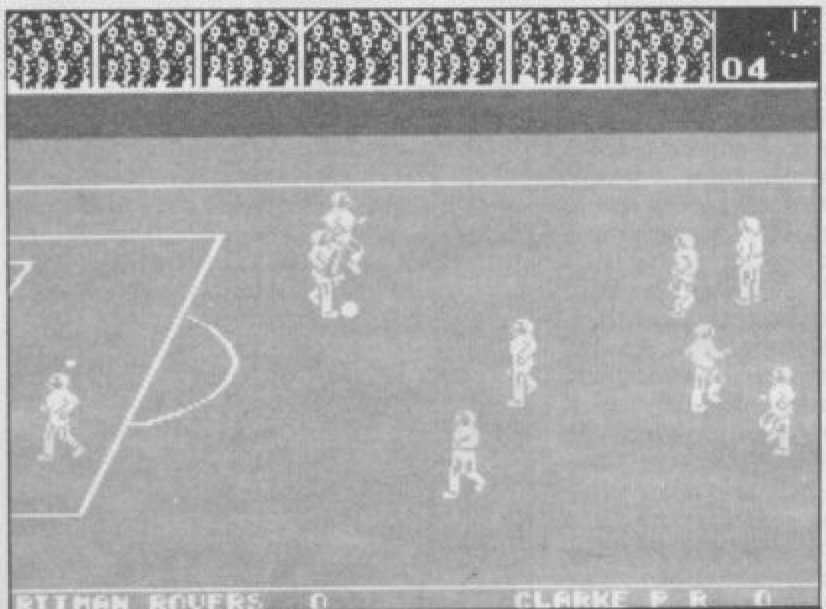
MATCH DAY

Different in kind from both **Football Manager** and **FA Cup** games. This is a game of reactions, responses, animated graphics and the rest. It was designed by ace programmer, John Ritman (he of **Batman** fame) and the program is (sort of) the Spectrum equivalent of **International Soccer** on the Commodore.

A joystick is more or less mandatory on this one, and I must say I always found it a lot more fun playing against another human rather than the computer which seemed to me not to put up that great a fight. (If I can beat it there's something wrong somewhere.)

Nevertheless it looks pretty good and the playing system — the member of your team your joystick is controlling (usually the one nearest the ball) is highlighted — works well.

For an actual game of soccer rather than a team management exercise **Match Day** is still the first choice.



▲ Ocean's Match Day ● The bigger sprites make World Cup Carnival look pretty outclassed

FA Cup Games ● The game play isn't so hot but it's packed with sporting history ▶

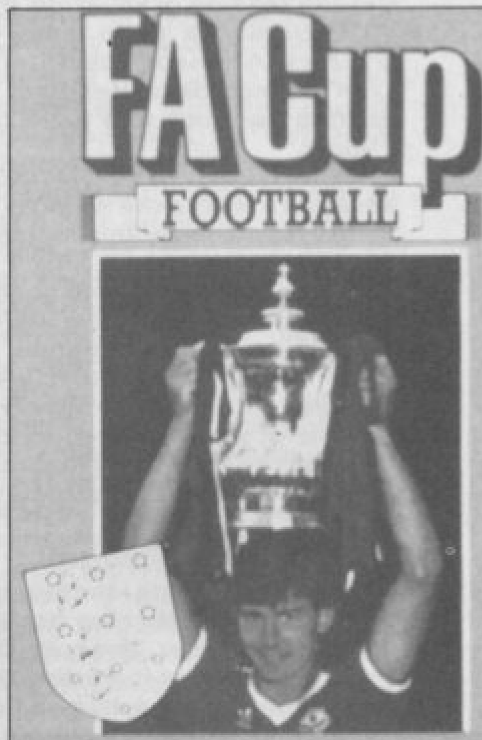
FA CUP GAMES

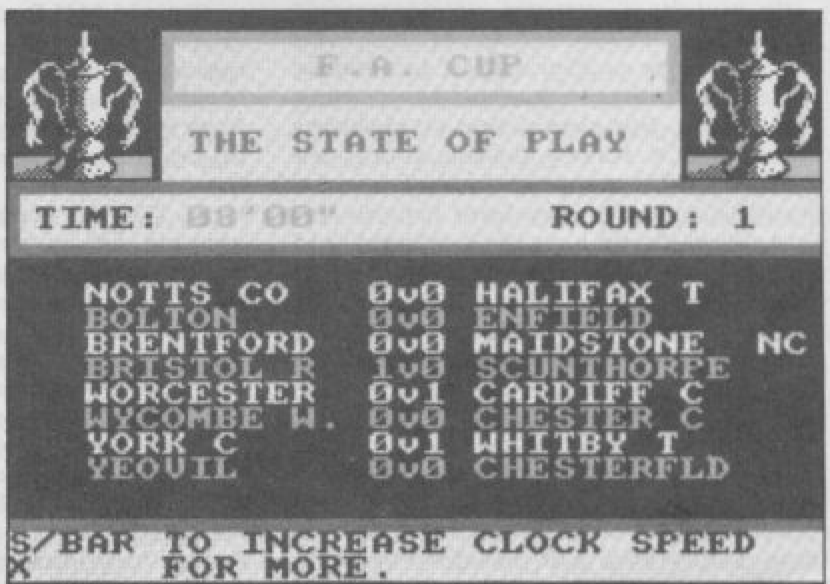
A game designed, apparently, around a vast database of footballing statistics. Like **Football Manager** it is not a game of graphics and movement but rather of menus and selection.

The trouble is, unlike **Football Manager** it doesn't crack it as a game. In fact it's barely a game at all — as though someone built up the database of real team performances and then wondered what to do with it.

It may be true that a certain team plays a certain type of game much better than another but simply to be 'given' that factor as a fixed variable hardly makes for an exciting game.

An interesting program for those absolutely addicted to the hard facts of footballing statistics. Otherwise avoid.





Steve Turner, author of Hewson's Quazatron

The specification of the Loki is a gamesplayer's dream. The power of the micro to animate graphics depends on two main factors.

First, screen resolution. The higher the resolution the more detailed the graphics. However, high resolution means more data to move to the screen. In the most useful display mode for games the pixel resolution of the Loki is similar to that of the Spectrum. But the colour resolution is at pixel level making the memory map a huge 53K bytes.

Second, the data-to-screen speed. This is where the Loki will leave all other affordable micros far behind. Using hardware it would be possible to move data at many times the fastest software routine. Using the Spectrum the fastest way to move a byte by software takes 56 microseconds. With hardware — like the Loki — the limiting factor is the speed of the chips, say a maximum of 1000 times as fast.



My guess is the Loki would be able to move screen data at 24 times the Spectrum speed, the same rate as its video output. This gives it three times the animation power of the Spectrum and in proper pixel colours. If clever buffering techniques are employed by the programmer to limit the amount of data output to the screen animation rates of up to 50 cycles a second could be achieved. This gives the smoothness of movement that is now achieved by state-of-the art games machines.

Uridium on the C64 is animated at this rate and is a good example of the quality to expect. Of course where Uridium strains the last ounce of power out of the poor CPU the Loki's CPU would be hardly used for the screen display leaving it to run the game algorithms. Therefore more sophisticated game designs could be made to run with the same smooth cartoon quality.

In the mode I am considering the Loki would provide a choice of 62 colours in each pixel. This means there would be three shades of each primary colour, not enough for fine graduation shading but more than adequate for most purposes.

The drawback to so many colours is the extra space needed to store all the graphics. A typical Spectrum game holds 15K of graphics data. This could take 120K of the Loki's user Ram and the standard machine will only have 64K. So packing methods will have to be used limiting each object to say two or four colours.

For the first time real sound effects could be used in a game. Imagine an arcade adventure where the sound is used like a film soundtrack to add to the atmosphere and suspense, echoing footsteps are heard, a door creaks open a blood chilling scream fills the air . . .

The limiting factor will again be the space to store digital sound patterns. What will be more likely is the use of algoriths to manufacture the electronic tones we associate with arcade games.

The musical possibilities are such that the machine would be used by serious musicians. Connect a keyboard with suitable software and you have a synthesier capable of sampling, sequencing or the modelling of totally new sounds.

Just when I thought I had to save up a thousand pounds to own a dream machine here is a possibility, perhaps remote, that I could own one for a mere £200.

HiSoft's Andy Pennell

The Loki will do almost anything a home computer ever has to do, and a lot more besides. The main things that impress me about it are the 7MHz clock rate, which makes it run faster than anything else (most 68000 machines included), the amazing graphics and the Ram potential.

As mainly a systems programmer I would like to write 'standard' programs but with very neat graphics, something which has rubbed off after programing the Amiga. For something straightforward like a screen editor there are loads of different things that can be done to make it easy (and fun) to use including icons, multi-windows and menus. Even without a mouse (I don't think one comes with Loki) with its good graphics capability any program could be made neat to look at and easy to use.

If Loki can run CP/M, unlike the Spectrum 128 (because you can't page in Ram at location 0) then it should knock the Amstrads for six, thanks to its clock speed and hardware-assisted graphics. It would need a disc interface though. Loki could do well as a small business machine (watch out the PCW8512) as it can display 80 characters (at last!), have a lot of memory, and has a proper keyboard (at last again!).

One thing that does worry me is how all the hardware is going to be accessed via software, and Sinclair in the past has been terrible when it comes to defining entry points for programmers — the old 16K Rom could only be used when Ian Logan's book came out, the Interface 1 Rom has to be called directly for most things, and the Spectrum 128 Rom has even fewer entry points. With all of these Roms any changes made have caused real compatibility problems. There is supposed to be a massive amount of in-built software but it would cost a fortune to commission the relevant companies and the amount of Rom space would be massive.

I would very much like the Loki to see the light of day, but Amstrad could kill their other machines off with it.

It is simply the best machine yet mooted for games, could do well in small businesses if it runs CP/M, and could do very well as a poor man's Amiga for video effects and sound generation.



Gargoyle's Greg Follis and Roy Carter authors of Tir Na Nog, Dun Darach *and* Sweevo's World

The concept of the 'computer movie' is trotted out with depressing regularity in the ad blurbs for many a new game.

Nevertheless, it is an ideal that Gargoyle has always pursued in our adventure series. A machine like the Loki could bring the realisation of such an ideal several steps closer.

The problems currently encountered in trying to produce life-like images on a Spectrum screen are ones of scale.

The resolution of a Spectrum screen is such that small images lack the definition to look life-like — when a pixel is half the total width of a character's arm, the result is distinctly 'computeresque'. The soloution to this is to use larger images, somewhere around 56 to 80 pixels tall.

Large images occupy masses of internal store — for the main character in a game, we normally require 50 or 60 individual 'frames' to ensure the animation is as smooth as possible.

With a machine like the Loki, however, these irritating 'little' problems begin to evaporate. For instance:

While the most likely resolution for game production is 256x212 pixels which is comparable to the Spectrum, the use of individually coloured pixels would allow colour-shading to give a solid and realistic picture.

A 7 MHz chip and all its associated interrupt-handling capabilities means that the screen display will not slow down the working of the CPU. Couple this with the 'blitter' technology embodied in the Rasterop hardware and imagine tall alien figures moving casually through the sort of 3D landscape only previously seen in the Amiga version of The Pawn.

Of course, to store all this additional information needs all of the 128K Ram and the mighty back-up of a 1 Mbyte Softcard.

A further point of interest is the speculation that the Loki will be provided with the means to capture and display input video pictures. We have been experimenting for some time with digitised input on everything from Spectrums to IBMs and we have no doubt that a lot can be achieved in the production of life-like computer graphics via this technique.

So, while the fantastic sound chip, the enhanced Basic and the light pen are tremendous bonsuses, the Loki could provide the chance to direct that elusive 'computer movie'.

That's tempting, very tempting . . .

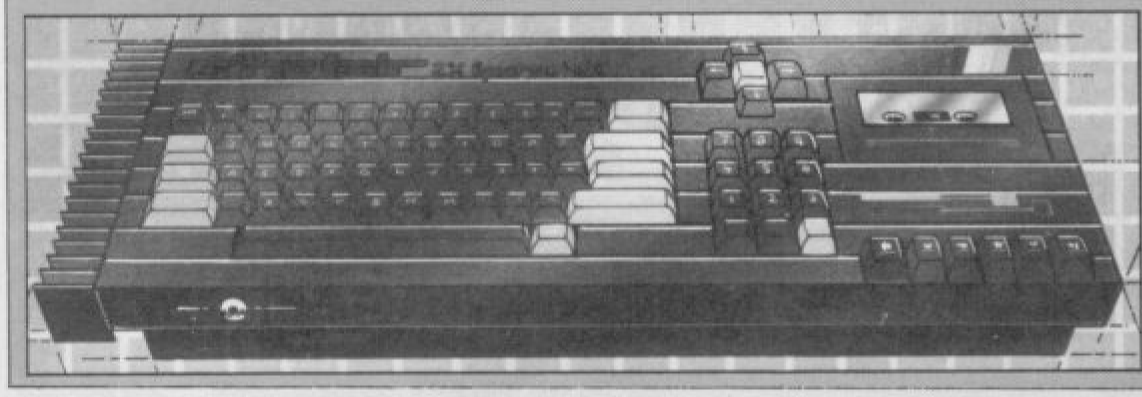
Loki: taking the programmer's view

With the existence of the Loki SuperSpectrum now confirmed by Sir Clive the ball is firmly in Amstrad's court.

Whether the machine will ever see the light of day is still far from certain. The two custom chips which give the Loki its Amiga-like power still represent a dauntingly complex development effort.

The idea of building what is in essence an 8-bit Amiga remains tremendously attractive, though, and Amstrad is certain to be very interested in pursuing it. Judging from the information we have been able to dig up though it looks highly unlikely that any Loki SuperSpectrum could be in the shops before mid-1987.

In the meantime, five top programmers examine the Loki idea and explain why they'd love to be able to write for it



Jon Ritman and Chris Clarke, responsible for Ocean's Matchday *and* Batman

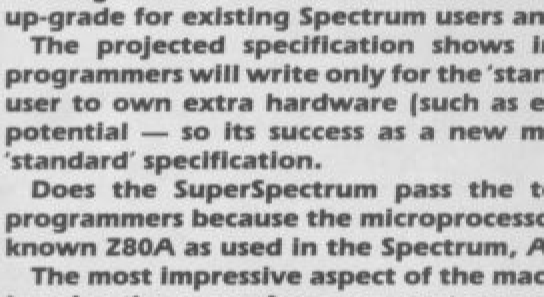
First impressions of its technical specifications make the Sinclair Loki seem excellent value for money.

Being able to run both 48K and 128K Spectrum software would make it an ideal up-grade for existing Spectrum users and a good choice for first time buyers.

The projected specification shows impressive expandibility. However most programmers will write only for the 'standard' machine — games which require the user to own extra hardware (such as extra memory) have a much smaller sales potential — so its success as a new machine in its own right depends on the 'standard' specification.

Does the SuperSpectrum pass the test? First, the machine is attractive to programmers because the microprocessor (Z80H) is fully compatible with the well known Z80A as used in the Spectrum, Amstrad and MSX computers.

The most impressive aspect of the machine is the high resolution screen display. Imagine the screen from a current game like our own Batman with twice the detail and 16 colours! The blitter is an excellent and essential addition to the screen display to allow fast graphic handling and screen scrolling.



Jon Ritman

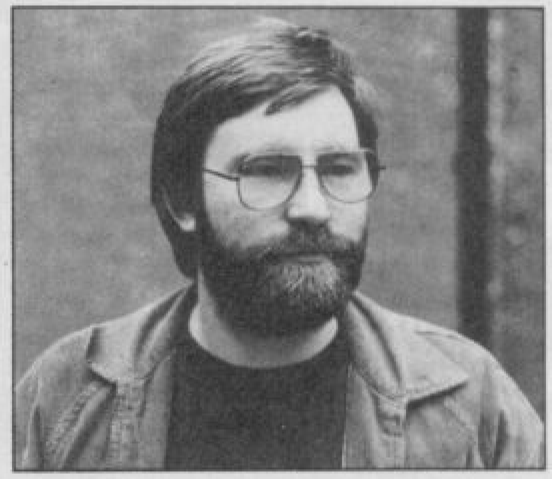
So far, so good, but here we come to a major pitfall in the otherwise excellent standard specification — 128K of memory is pitifully inadequate for this machine. Consider Batman on the 48K Spectrum, it uses 22K of memory to store its graphics. In the example above with twice the resolution and 16 colours, it would require 176K just for graphics; when 53K of the original 128K is used for screen alone we would say that a minimum memory requirement is 256K to make the machine viable with 512K being preferable.

As our experience with Fairlight synthesisers is limited to Kate Bush albums we feel a bit unqualified to comment on this part of the specification, however it should be possible to produce speech and superb sound.

Apart from the very serious memory limitations, £200 for the specifications described so far would be superb value for money. When you look at the full specification of the machine and discover numerous interfaces, ports and free software on top of the graphics and sound it begins to seem too good to be true.

It is difficult to imagine such a machine being available for under £500. A machine with comparable sound and graphics, the Commodore Amiga, costs £1900.

FAST FORWARD



Jeff Naylor, Z80 book author and video hardware specialist

A careful examination of the Loki SuperSpectrum will undoubtedly hearten programmers, particularly those whose imagination out-paces the graphics available on the present generation of home computers.

But the facilities offered will not just mean improvements to games and utilities that are already available; the suggested Loki machine could open up whole new areas to home computing.

At present the only home machine to be used for video production is the BBC micro because it can have a 'GenLock' facility added (at a minimum cost of £70) — the SuperSpectrum will have this as standard. GenLock allows you to control the computer's screen display so that it runs at the same line and frame frequencies as other video sources: only when these are 'in sync' can you cut or mix the computer's output with a video camera or recorder. With a simple vision mixer and fairly straightforward software, the SuperSpectrum could be become a machine for adding titles, logos and roller captions to home videos. What's more, it can outshine the BBC micro with its speed of animation and greater colour range. Indeed, the quality of lettering will be such that the SuperSpectrum would be capable of finding its way into industrial and even broadcast-quality studios.

If you have no plans to shoot and edit your own videos, you may still find a use for the sophisticated video features: the frame grabber should be able to snatch pictures from the TV for you to alter and use in your own graphic displays, while the blitter technology will bring video effects to computer games — the zooms, tumbles, flips and wipes at the moment so fashionable on TV and rock videos.

Anyone who has played some of the interactive videodisc games available in the arcades may be wondering if the features of the SuperSpectrum will allow you to play this type of game in your own home. The answer is a guarded yes. Yes because all the required outputs and inputs are available, but guarded because the cost of the videodisc player (currently around £300) and other hardware may well be a stumbling block.

The SuperSpectrum — if it comes off will vastly expand the horizons of low-cost computing.

BARGAIN SOFTWARE:

Dept. Su., Unit 1; 1 Esmond Road; London W.4. 1BR

BUY BY PHONE
RING 01-995 2763

PRICE PROMISE

If you wish to purchase any product from our list and find that you can buy the same product cheaper from another mail order company, simply enclose the lower amount, stating the name of the other company and where you saw the advert. (It must be a current issue). Price Promise does not apply to other companies "Special Offers".

ORDERS OVER £30 DEDUCT 10%

	REC. PRICE	OUR PRICE
THE PLANETS	9.95	7.45
SAI COMBAT	6.95	5.20
GREEN BERET	7.95	5.90
BOMB JACK	7.95	5.90
PAPER BOY	7.95	5.90
EMPIRE	9.95	7.40
THE PAWN	9.95	7.40
SUPERBOWL	9.95	7.40
SKYFOX	8.95	6.70
BOUNCERS	9.95	7.40
"V"	7.95	5.90
PING PONG	7.95	5.90
SHOWJUMPING	9.95	7.40
ENIGMA FORCE	9.95	7.40
SIR FRED	9.95	7.40
BATTLE OF THE PLANETS	7.95	7.40
COMMANDO	7.95	5.90
BARRY McGUIGAN'S BOXING	7.95	5.95
LORD OF THE RINGS	15.95	11.90
THINK	7.95	5.90
THREE WEEKS IN PARADISE	7.95	7.45
TURBO ESPIRIT	8.95	6.70
YIE AR KUNG FU	7.95	5.90
ROLLER COASTER	6.95	5.20
SWEEVO'S WORLD	7.95	5.90
SABOTEUR	8.95	6.70
COSMIC WARTOAD	7.95	5.90
GUNFRIGHT	9.95	7.45
TOMAHAWK	9.95	7.45
MOVIE	7.95	5.90
ROCK 'N' WRESTLE	8.95	6.70
TRANSFORMERS	7.95	5.90
WINTER GAMES	7.95	5.90
GLADIATOR	7.95	5.90
TWISTER	7.50	5.45
FRIDAY 13th	8.95	6.70
MILKIE	7.95	5.90
ELITE	14.95	11.20
BACK TO THE FUTURE	9.95	7.45
WEST BANK	7.95	5.90
N.O.M.A.D.	7.95	5.90
RAMBO	7.95	5.90
TAU CETI	9.95	7.45
BACK TO SKOOL	6.95	5.20
ROBIN OF THE WOOD	9.95	7.45
LEGEND OF THE AMAZON WOMEN	7.95	5.90
CYBERUN	9.95	7.45
ZOIDS	7.45	5.90
BALL BLAZER	7.99	5.90
BLADE RUNNER	8.95	6.70
ZORRO	7.95	5.90
THE GOONIES	7.95	5.90
STARSTRIKE II	7.95	5.90
HUNCHBACK THE ADVENTURE	7.95	5.90
ARC OF YESOD	7.95	7.45
RUNESTONE	7.95	5.90
WAY OF THE TIGER	7.95	7.45
BEACH HEAD II	7.95	5.95
GYROSCOPE	7.95	5.90
GEOFF CAPES STRONGMAN	7.95	5.90
IMPOSSIBLE MISSION	7.95	5.90
BOUNTY BOB STRIKES BACK	7.95	5.90
	7.95	

COMPILATIONS	REC. PRICE	OUR PRICE
THEY SOLD A MILLION II: BRUCE LEE, KNIGHTLORE, MATCH POINT, MATCH DAY	9.95	7.45
ARCADE HALL OF FAME: RAID!!, BLUE MAX, ROCCO, FLAK, HUNCHBACK II	9.95	7.45
SPORTS PACK: SNOOKER, ON THE OCHE, WORLD CUP FOOTBALL, OLYMPICS (14 events), GOLF, DERBY DAY	36.00	5.99
COMPUTER HITS II: CODE NAME MAT, WIZARDS LAIR, TECHNICIAN TED, MUTANT MONTY, SNOOKER, ANDROID II, ON THE RUN, COVENANT, SUPER PIPELINE 2, CIRCUS	9.95	7.45
HOT SHOTS: MINDSHADOW, FIGHTING WARRIOR, SHADOWFIRE, GYRON	9.95	7.45
NOW GAMES 2: CHUCKIE EGG 2, AIRWOLF, TIR NA NOG, WORLD CUP, CAULDRON	8.95	6.70

	REC. PRICE	OUR PRICE
WORM IN PARADISE	9.95	7.45
CRITICAL MASS	8.95	6.70
PANZADROME	7.95	5.90
SURF CHAMP	11.95	8.25
FORBIDDEN PLANET	7.95	5.95
2112 AD	7.95	5.90
FIGHTING WARIOR	7.95	5.90
TERRORMOLINOS	7.95	5.90
WAY OF THE EXPLODING FIST	8.95	6.70
WINTER SPORTS	9.95	7.45
SWORD & SORCERY	9.95	7.45
NEVER ENDING STORY	9.95	7.45
ASTRO CLONE	7.95	5.90
THEIR FINEST HOUR	9.95	7.45
WORLD SERIES BASKETBALL	7.95	5.90
SPY vs SPY	9.95	7.45
F. BRUNO'S BOXING	6.95	5.20
DAMBUSTERS	9.95	7.45
SOUTHERN BELLE	7.95	5.90
MONOPOLY	9.95	7.45
CLUEDO	9.95	7.45
SCALETRIX	9.95	7.45
FAIRLIGHT	9.95	7.45

SPECIAL OFFERS		
VIEW TO A KILL	10.99	3.99
GREMLINS	9.95	3.99
CODE NAME MAT II	8.95	3.99
ALIEN	9.95	3.99
GREAT SPACE RACE	14.95	3.49
VALHALLA	14.95	3.99
EUREKA	14.95	3.99
DEATH STAR	7.95	3.49

ROCKFORDS RIOT	9.95	7.45
ABU SIMBEL (PROFANATION)	7.95	5.90
SHADOW OF THE UNICORN	14.95	11.20
MARSPORT	9.95	7.45
FRANKIE GOES TO HOLLYWOOD	9.95	7.45
RASPUTIN	7.95	5.90
MONTY ON THE RUN	7.95	5.90
G. GOOCHS TEST CRICKET	9.95	7.45
SPEC DRUM	29.95	26.95
THE ART STUDIO	14.95	11.20
THE YOUNG ONES	7.95	5.95
SHADOWFIRE	9.95	7.45
HYPER SPORTS	7.95	5.95
INTERNATIONAL BASKETBALL	6.95	4.90
NOW GAMES (6 top titles)	8.95	6.70
MEGA HITS (10 top titles)	9.95	7.45
COMPUTER HITS 10 (10 top titles)	9.95	7.45

BARGAIN SOFTWARE ORDER FORM

Please send me the following titles. BLOCK capitals please!

Type of computer ____________________

Title:—	Amount
Total Enclosed £	

Name ....

Address ....

....

....

....

....

Tel. No. ....

VISIT OUR SHOP
474A Chiswick
High Road
London
W4

Please make cheques or postal orders payable to **BARGAIN SOFTWARE.**
Prices include P&P within the U.K: Europe please add £0.75 per tape:
Elsewhere please add £1.00 extra per tape

EQUINOX

ARCADE REVIEW

Equinox does not feature any members of the Wally family. For this at least, some of us are glad.

It is, instead, a collect-and-dodge game of vast proportions. Were games judged on the sheer volume of bouncing and splurging sprites alone the game would be a winner. As it is **Equinox** contains nothing new. There is much to enjoy but nothing to admire.

The plot is to clear a number of levels of unstable nuclear cannisters, which are liable to blow up. On each level the time left before that level's cannister explodes ticks away at the top of the screen.

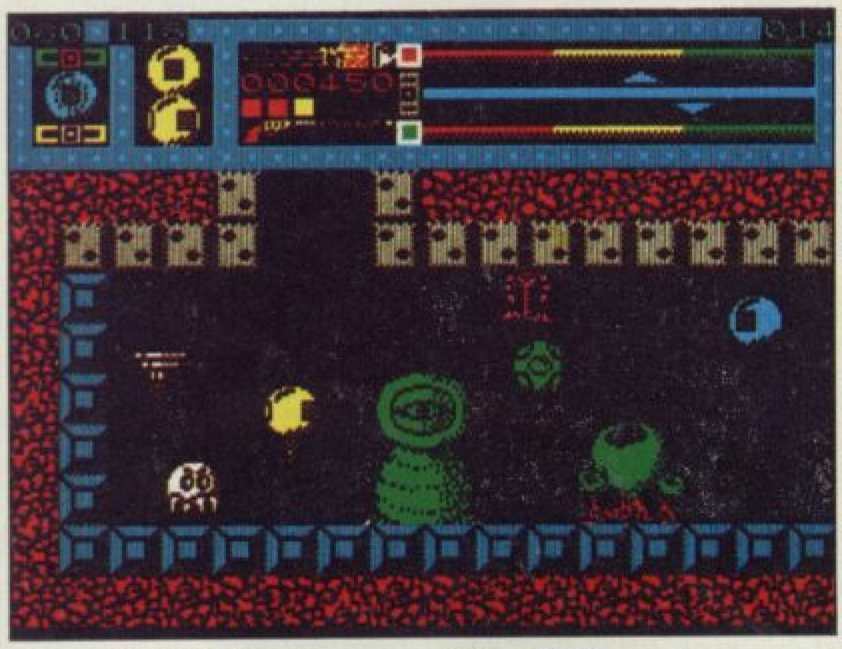
Quite apart from the problem of finding the cannister and discovering how to travel from one level to the other, there are bouncing monsters of many species including splogy jelly, a cute penguin, orbs, hair standing on end thing, and the particularly popular 'oh God I can't think of anything else and I was supposed to have this game delivered last week' programmers 'please yourself' abstract shapes.

And, all of them bounce determindedly.

The thought part of the game derives initially from trying to discover what objects when combined together do what. Some of these links are obvious, eg stone blocking passages and sticks of dynamite. Some less so, eg blue spheres and teleport type devices. In the end though, the game is too much of the too familiar.

ASSORTED CLUES AND TIPS

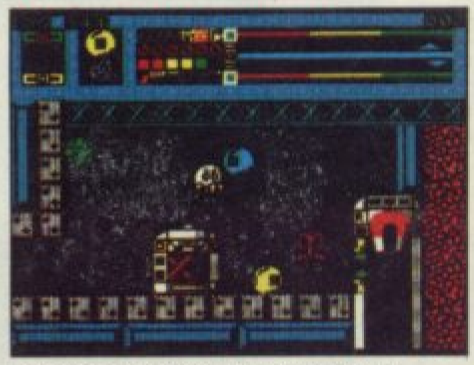
1) Dynamite blows away problem rubble
2) Blue tokens pay for same level transporter use
3) Keys unlock doors (there's a surprise)
4) The first cannister is somewhere behind the rubble as are a number of other useful objects
5) You need to find a drill almost immediately in order to get the dynamite
6) To use a transporter: Get Token, Enter Transporter, Use Token, Press Thrust.



◀ Dodge the assorted nasties ● Exit right for inter — level transport

PLAYING AREA

One of those vast mazes constructed of what looks like chrome and steel with lots of straight edges and a few twiddly bits — a bit like the inside of an air conditioning duct. There are big central rooms and small passages. Placed around this sleek high-tech background there are some rather Heath Robinesque objects like a giant old fashioned magnet and some inelegantly constructed teleports. There are laser barriers, locked doors, switches and occasional large monsters (which do not bounce but merely blink a single bloodshot eye) strewn of the levels.



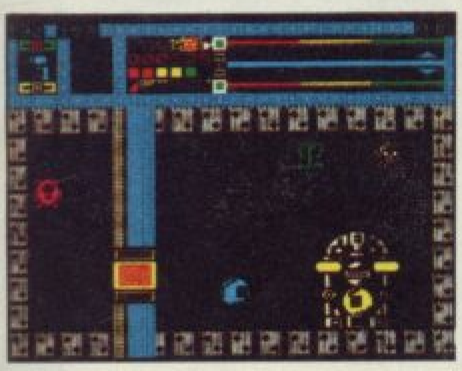
▲ Find a drill to get the dynamite. ● The magnet gets you nowhwere. ● No way out of this screen but left.

FACTS BOX

Smooth, big sprites, but little originality. Equinox is only for addicts of the collect-and-dodge genre

★★★★★

EQUINOX
Label: *Mikro-Gen*
Price: *£9.95*
Joystick: *Kempston*
Memory: *48K*
Reviewer: Graham Taylor



▲ In position the same level transportation. ● Behind the barrier beam wall lurks a cutesy sprite. ● Joystick up to use transport

PLAYING THE GAME

Large silver canisters must be located and dumped down the waste disposal accessed via the transporter near the opening screen. You'll soon realise part of the technique of playing the game is knowing when to leave a level for a while (thereby halting it's timer) to return to it later. Some problems can only be silved by collecting objects from one level and using them on another.

Controls are, left, right, thrust, collect/use, fire. The moment you start moving the timer for the cannister on the current level starts ticking, seconds later in true Ultimate style the assorted aliens materialise. Guess what you do to them. Repeatedly. Next you start to pick up objects and carry them around, fruitlessly pressing the *Use* button in all the wrong places until finally something happens. The first thing you'll probably discover a use for will be the Smart bomb — it has a big S on it. There are two kinds of teleport — between areas on the same level and between levels. To get between levels you need a passcard, the higher the level the higher the card number necessary, ie Passcard 8 will get you into all the levels, Passcard 2, only into Levels 1 and 2.

SOFTWARE STAR RATINGS

All software reviews carry a star rating, the basis of which is value for money programming, graphics, speed, speech and sound presentation and addictiveness

★★★★★
Solid gold. Buy it

★★★★☆
Well worth the folding stuff

★★★☆☆
Pretty average Buy if desperate

★★☆☆☆
Very poor. Probably over-priced too

★☆☆☆☆
A total rip-off. Complain loudly

ARCADE REVIEW — TOOL-KIT REVIEW — WORK-OUT REVIEW — ADVENTURE REVIEW

Each review carries an icon which shows the type of software.

Arcade is for animated games, which in general, reduce the life span of your joysticks.

Toolkit covers programming utilities which improve the quality of home-made software or packages which make machine code easier to write.

Work Out software which can be used in the home, such as car maintenance or home finance.

Adventure includes either the graphic or text adventures

ocean

WORLD PUBLISHER OF COMPUTER SOFTWARE OFFERS YOU A GREAT CHANCE TO

KEY INTO SUCCESS

With tremendous opportunities for
FIRST CLASS PROGRAMMERS
in the fields of
SOFTWARE DEVELOPMENT
PROGRAM TRANSLATION
GAMES DESIGN

Expansion in all the Group's activities requires constant HIGH QUALITY SOFTWARE and we now

URGENTLY REQUIRE

products for Autumn/Winter 1986.
If you would like to work with the Best for Maximum Reward either Directly or on a Freelance Basis contact in confidence:
Software Development Manager

ocean

6 Central Street, Manchester M2 5NS.
Tel: 061-832 6633 Telex: 669977

Completed programs also wanted for:
SPECTRUM · AMSTRAD · COMMODORE 64 · C16
ATARI · BBC and ELECTRON Micros
Cash or Royalty Payments · Immediate Decision

CONTACT US TODAY!

FREE SOFTWARE*
FREE 15 MONTHS MEMBERSHIP

A great new home computer club now under way!! Savings on software & books from 25% and up to 40% off R.R.P. originals only. You're never committed to any makes for software or books nor are you committed to buy. Every two months you get a software update, free software & game playing tips. Savings on hardware from 15% and up to 30% off R.R.P. not just joysticks but a wide range of peripherals for your computer. Normally membership is £15 for 12 months but for a limited period only membership is **FREE** for 15 months when you buy just one of the programs listed below with and RRP of £7.95 or more through us, choose one of the emphasised programs as your free bi-monthly software. Our club is designed for all Amstrad CPC, ZX, Spectrum 48K 9 +, Commodore 64 and 128.

SPECTRUM

A.C.E.	£10.95	THE GOONIES	£ 8.95	LORD OF THE RINGS	£15.95
ELITE	£14.95	TOMAHAWK	£ 9.95	BACK TO THE FUTURE	£ 9.95
TAU CETI	£ 9.95	WINTER GAMES	£ 7.95	BATTLE OF THE PLANETS	£ 9.95
ARENA	£ 9.95	ENIGMA FORCE	£ 9.95	THEY SOLD A MILLION	£ 9.95
DAMBUSTERS	£ 8.95	ARC OF YESOD	£ 8.95	THE FOURTH PROTOCOL	£12.95
WATERLOO	£ 9.95	IMPOSSIBLE MISSION	£ 9.95	SECRET DIARY OF A MOLE	£ 9.95
CYBERRUN	£ 9.95	SURF CHAMP	£11.95	THE WORM IN PARADISE	£ 9.95
FAIRLIGHT	£ 9.95	DESERTS RATS	£ 9.95	ARCADE HALL OF FAME	£ 9.95
SUPERBOWL	£ 9.95	DESERT FOX	£ 7.95	WAY OF THE EXPLODING	
AUSTERLITZ	£ 9.95	SPITFIRE 40	£ 9.95	FIST	£ 9.95
		THEIR FINEST HOUR	£ 9.95	GLADIATOR	£ 8.95

One of these Mastertronic games if **FREE** when you buy one of the above programs:

*** DEVILS CROWN * CAVES OF DOOM ***
*** ONE MAN & HIS DROID * FORMULA ONE SIMULATOR * SOUL OF A ROBOT ***

Who said anything about you don't have a choice in software?

* BUSINESS * UTILITIES * EDUCATION * ARCADE *
* ADVENTURE * ARCADE ADVENTURE * SIMULATION * STRATEGY *

These are just a few hardware prices which are exclusive to our club members:

AMX MOUSE DESIGNER	£ 54.45	OPUS DISCOVERY 1	£122.50
BROTHER HR5 PRINTER	£99.95	OPUS DISCOVERY 2	£254.95
EPSON RX 80 PRINTER	£212.50	SAGA ELITE KEYBOARDE	£ 59.45
JUKI 6100 PRINTER	£339.95	SAGA 2 + KEYBOARD	£ 44.95
MICROVITEC CUB 1451	£250.00	SINCLAIR EXPANSION PACK	£ 84.95

Our complete price list is much bigger than this, for any enquiries that you may have please ring (0376) 45639 (24 hours) (it's much quicker than writing).

Please make cheques/postal orders payable to **T.L. DAVIS**. All priced items include postage & packing except hardware items below £100, also are correct when going to press.

Post to: **THE T.L. DAVIS HOME COMPUTER CLUB,
286 WOODBRIDGE ROAD,
IPSWICH,
SUFFOLK,
IP4 2QU.**

FOOTBALL MANAGEMENT STRATEGY GAMES FROM E & J SOFTWARE

48K SPECTRUMS

3 QUALITY FOOTBALL GAMES FOR SERIOUS ENTHUSIASTS. EACH GAME USES THE FULL AVAILABLE MEMORY OF YOUR SPECTRUM OR SPECTRUM + AND IS PACKED WITH GENUINE FEATURES.

PREMIER LEAGUE

OUR COMPREHENSIVE AND EXCITING LEAGUE GAME — FEATURES INCLUDE: Training, Team Selection, Substitutes, Half-Time Scores, Full Squad Details, Named Goal Scorers, Team Styles, Save Game, Financial Problems, 5 Skill Levels, Transfer Market, Injuries, Continuing Seasons, Printer Option, PLUS MANY MORE!

EUROPEAN TROPHY

A SUPERB EUROPEAN COMPETITION STYLE GAME WITH THESE FEATURES: Home & Away Legs, Away Goals Count Double, 2 Substitutes Allowed, Extra Time, Penalty Shoot-Outs (with sudden death), Match Injuries, Injury Time, Match Penalties, 5 Skill Levels, Pre-Match Reports, Team Selection, Named Goal Scorers, Save Game, Printer Option, PLUS MANY MORE!

***** SPECIAL FEATURE *****

Transfer your PREMIER LEAGUE winning side into EUROPEAN TROPHY.

Both these games can be played separately or as COMPANION games.

***** Games £5.25 each *****

SPECIAL TWIN PRESENTATION PACK OF BOTH GAMES AVAILABLE AT ONLY £9.95.

AND NOW!

WORLD CHAMPIONS

An exciting World Cup Football Management simulation taking you from the first warm up friendlies through the qualifying stages, Tour Matches and onto the finals. LOOK AT THESE FEATURES! Select Team from Squad of 25, Pre-Match Team News, Disciplinary Table, Full Results List, Match Suspensions, Change Player or Team Name, League Tables, 7 Skill Levels, Save Game, Printer Option, PLUS MANY MORE!

WORLD CHAMPIONS features a superb comprehensive text match simulation including the following:– Match Timer, Named Goal Scorers, Goal Times, Corners, Free Kicks, Injuries, Bookings, Penalties, Sending Off, Injury Time, Extra Time, Penalty Shoot-Out.

***** ALL THIS AT THE UNBEATABLE VALUE OF £6.95. *****



ALL GAMES NOW IN STOCK FOR IMMEDIATE DESPATCH — ORDER YOUR COPIES NOW!

FANTASTIC VALUE — ORDER ALL THREE GAMES FOR ONLY £15.95.

ALL PRICES INCLUDE POSTAGE AND PACKING (ADD £1.00. OUTSIDE U.K.).
AVAILABLE BY MAIL ORDER ONLY.

**E & J SOFTWARE, Room 1
37 Westmoor Road,
Enfield, Middx,
EN3 7LE.**

THE PRICE OF MAGIK

ADVENTURE REVIEW

Price of Magik is further proof of Level 9's position as the leading UK adventure house.

It is an enormous adventure, containing a considerable variety of complex puzzles. I've been playing for days and I've hardly started.

At the beginning of the adventure, you find yourself on a driveway outside a strange house: you have a choice of exits — up, up, and away, to the woodshed, or into the house. If you go in or up, you'll discover that you can't see in the dark.

Once you've found out how to see where you are going, you can begin to explore. All you are told is that you must learn everything you can about magic — and you know nothing more than the bare fact that there are 18 spells you can learn.

As it turns out, learning spells isn't that difficult, although you also have to find out how to cast them. Once you know what the magic word for a particular spell is, and you know the format for casting it, you can give it a try. If nothing more, the program will tell you what focus you need to cast the spell.

The main trick to the game is finding and securing the various items you need to cast the different spells, and then working out just how, why and where to actually use them.

So far I've discovered three magic words, and managed to cast one spell. At first it's a little odd that while the program is quite happy to tell me what I need to cast a spell if I don't have it, I haven't the faintest idea what item lets me cast the spell I can do.

I've come across a couple of rather nasty monsters — a skeleton and a werewolf — and a ghost who (or should that be which?) I managed to lay by a little industrious spade work and rolling the bones. By now I'm attired in a natty suit of armour and some plush robes. And as for what I'm carrying, well, I could open a supermarket: a candle and a book (no bell yet), a spade, a cage, a grimoire, a knife, various scrolls and bits of parchments, some herbs and various other bits and pieces.

Unlike other adventure games, though, objects don't count as treasure — you score by working out how to use them in various spells.

If you type in *Score* during play, you get a rather cryptic message which tells how sane you are, in percentage terms, what level of magic use you have reached, and how old you look. The object, it seems, is to become as mad as possible — I've found a message somewhere that says "you have to be mad to use magik."

The parser which interprets your keyed-in responses is excellent. It can understand a very impressive selection of quite complicated commands: you can also string together commands by the use of commas, so once you know what you think you should be doing in the early part of the game, you can zip around, get everything you need and then get into the house very quickly.

Armour is a necessity as the various creatures you meet will often attack you. So is a good weapon — taking on a werewolf with a titchy little dagger just isn't on, I discovered: it made very literal mincemeat of me before I'd even dented it.

One interesting thing about the cassette is that there are two different versions of the game on it. One is the standard text and graphics version running on the 48K Spectrum. The other acts as a text-only version on the 48K, with more descriptive prose included but, if loaded on to a 128K machine, is a text and graphics version which makes use of the expanded memory. This means that you get extra commads, like *RamSave*, which lets you save your location to the machine's own memory, and *Oops* which lets you take back a number of moves. 9's Pete Austin told me.

Graphic versions of the game are protected by Lenslok — but you only have to use the bloody thing every so often, which means that you can play along happily for hours. I was very grateful for this, as I can't seem top work the Lenslok system with any ease.

If you like adventures, and you own a 48K Spectrum then you are going to love the Price of Magik. But if you have a 128K Spectrum then you are going to end up living this game. It's the first title which made me feel I was missing out by not owning a 128 (I borrowed someone else's for the review).

Everything in The Price of Magik is of the best — plot, parser, graphics, and above all the execution of the game.



▲ Near the start and you've got one item ● Be careful or you could miss out on others ● Grab everything you can ● And don't let a little noise put you off

SINCLAIR USER CLASSIC



▲ Don't spend all night on the tiles ● There's no point in having an attic attack until you've rubbed your eyes ● Once you get inside have a good look around ● Make sure you 'do the office'

The best way into the house is to climb the vine ● Not mch to see on-route though ▼



FACTS BOX

Level 9's best yet — they're amazing. I've been playing for days and hardly scratched the surface

★★★★★

PRICE OF MAGIK

Label: Level 9

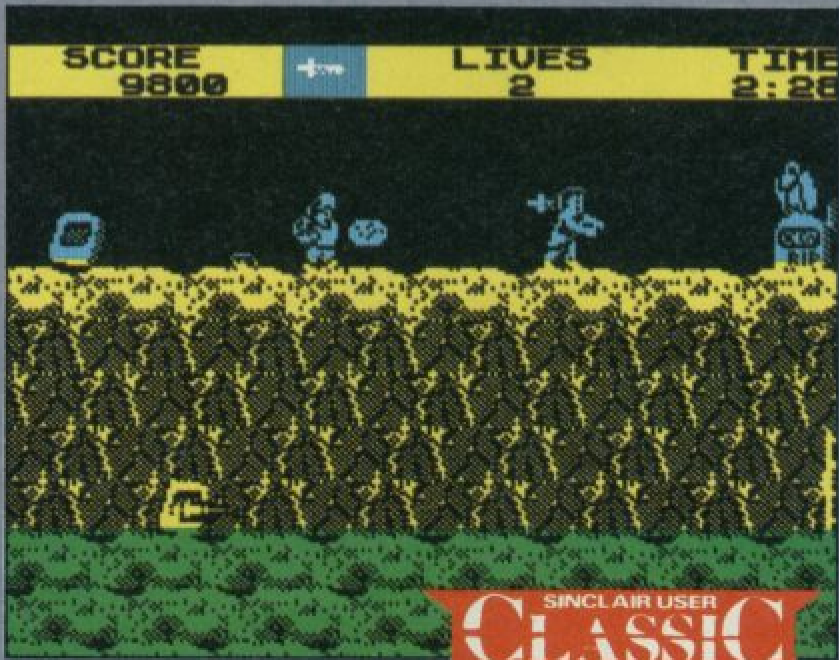
Price: £9.95

Memory: 48/128K (128 enhanched)

Reviewer: Gary Rook

ARCADE REVIEW

GHOSTS 'N' GOBLINS



▲ On top of the cliff face ● Note the weed's spit about to hit you ● and the zombie and owl ● Below is a well-disguised lance

Yup, Elite's done it again. After bringing arcade classics like **Commando** and **Bomb Jack** to your micro — both Spectrum chart-toppers — it's now produced **Ghosts 'n' Goblins**. And a very creditable version of the original it is too.

Be warned, **Ghosts 'n' Goblins** is pretty difficult and you'll be going places where angels fear to tread. You start off in the graveyard, hopping over gravestones and up and down a cliff face while avoiding the zombies. The screen scrolls extremely smoothly from left to right as you move, and the zombies, with arms outstretched shamble after you in droves. Though high scores can be earned by standing still and knocking them off as they appear from under tombstones, that cuts down your time to complete the level, and with only three minutes for this section, you need every second you can get.

It doesn't leave much time for weapons collecting. If you see a zombie struggling along with a cauldron, shoot him and you'll be able to pick up either a dagger, a lance or a fire ball. These have various properties and each has its uses. The dagger is the fastest and you can have four in the air at a time. The lance is marginally slower and only three can fly at a time. The fireball can only be lobbed a short distance and is probably the most unweildy weapon to fight with.

A neat twist is that in each game you get two chances. The first time you charge into a zombie, you give a huge shudder and your suit of armour flies off into the night, leaving you naked and almost defenceless. Next time you're hit, you're jolted off your feet and fall back as a heap of bones. One of your five lives lost.

As you attempt to climb the cliff you'll come under attack from killer owls (killer owls?) which dive down, and deadly weeds which lie in wait as you clamber on to the next level — they spit at you and it is as much a matter of luck as good judgement if you manage to survive the combined ministrations of these two killers. Both behave intelligently and move or fire at you when you move — they're deadly accurate too. Told you it was difficult. We're not even half way through the first level and already I've been killed a billion times!

Eventually you'll meet the gremlin — a real pleasant character. As soon as you see it take a few steps back and daggers at the ready, fire. As you do, it rises into the air. Jump up and continue firing. You'll need several direct hits.

The graphics up to this point are very close to the original arcade game and Keith Burkhill, the programmer, has managed to reduce colour clash to a minimum. Use of simple colours reduces attribute problems still further. The trade-off is that the graphics for the central character has had to be kept small and because of the lack of colour it is often difficult to make out objects. For instance, if you run over a zombie and pot, the weapon left behind is difficult to depict. The same goes for the owl, perched like a stone just waiting for you to move.

These are minor problems though and in no way detract from the game play. Later screens combine a number of exciting features from the arcade game, and these prove even more difficult to overcome. Each level has three areas to get through, with different scenery and problems. At the end of each level is a 'special' monster, or two which must be killed to gain access to the next.

Fight through the freezing corridors of the ice palace and avoid the floating goblins. Then make your way through the slums, avoiding the devils and into a warehouse, full of pipes, levels and lots and lots of big, big, goblins. These need to be hit more than once, are semi-intelligent, and make sure you've sussed out an escape route. Then on to the guardian monsters and into the third level, which is so tricky that even the Elite programmers have problems getting through it.

Ghosts 'n' Goblins is for the nimble fingered only. It's frustratingly addictive, extraordinarily difficult, requiring impeccable timing and not a little luck. And if you manage to get all that together you might just save the princess.

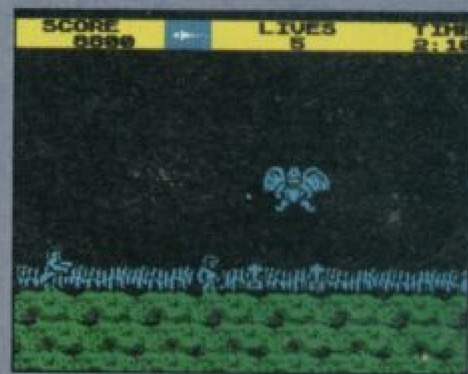
OK, so like Imagine's **Green Beret, Ghosts 'n' Goblins** is really no more than a levels and ladders game, but that doesn't seem to matter. The original graphics and furious action more than compensate.

Very playable and very just one-more-go-ish.

FACTS BOX

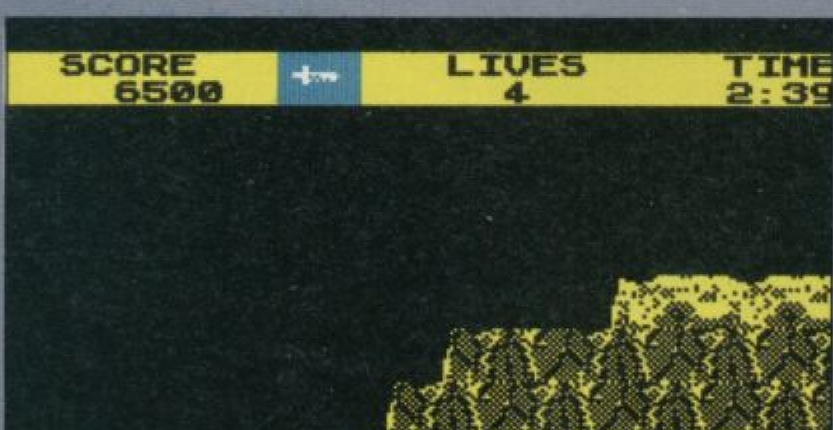
Yet another classic arcade conversion from Elite. Fiendishly difficult and more-ish. Very hot

★	*GHOSTS 'N' GOBLINS*
★	*Label:* *Elite*
★	*Price:* *£7.95*
★	*Memory:* 48K/128K
★	*Reviewer:* Clare Edgeley



▲ First encounter with the gremlin ● Jump up and shoot or you're dead

Approaching the cliff ● Watch the zombies, they appear from under your feet ▼





In this arcade comedy a mild-mannered diver, Gormless Gordon is set upon by buxom bulging Myrtle, the Mermaid with a face that sank a thousand ships.

Thrill to the music, quake at the terrors of the deep, boldly go where no man has gone before, and discover hidden wonders that will make your knees quake and have you reaching for your scuba gear.

FEATURES

An extensive underwater landscape including a wrecked ocean liner, submarine caverns and a sunken city.
Numerous puzzles to solve and objects to collect and use.
A "nutty" musical soundtrack which continually changes to accompany Myrtle through the varying locations.
Detailed fully animated cartoon style graphics in full colour.

Mail order:
Electric Dreams Software
23 Pond Street, Hampstead
London NW3 2PN

Available for:

Commodore 64 Cassette	(£9.99)
Commodore 64 Disk	(£14.99)
ZX Spectrum 48K	(£9.99)
Amstrad CPC Cassette	(£9.99)
Amstrad CPC Disk	(£14.99)

ELECTRIC DREAMS SOFTWARE, 31 CARLTON CRESCENT, SOUTHAMPTON, HAMPSHIRE SO1 2EW. TEL: (0703) 229694

ONLY THE BRAVEST FLY....

TOMAHAWK™

New, from the author of Fighter Pilot... a stunningly realistic helicopter simulation that puts you in command of an Apache Advanced Attack helicopter. You will learn to take off, to land, to manoeuvre and locate and destroy enemy tanks using Hellfire anti-tank missiles. You will experience authentic battlefield conditions as you endeavour to carry out your mission and return safely to base.

BY D.K.MARSHALL

48K SPECTRUM

Digital Integration would like to thank McDonnell Douglas for all their help and technical support.



SPECTRUM			
Tomahawk	48K	☐	£9.95
Night Gunner	48K	☐	£6.95
Fighter Pilot	48K	☐	£7.95
COMMODORE 64			
Speed King Disk		☐	£12.95
Speed King Cassette		☐	£9.95
Fighter Pilot Disk		☐	£14.95
Fighter Pilot Cassette		☐	£9.95
AMSTRAD CPC 464			
Fighter Pilot		☐	£8.95
Fighter Pilot Disk		☐	£13.95

Cheques payable to Digital Integration Ltd

I enclose a cheque/P.O. for ____________ Total

Name ____________

Address ____________

VAT and p. & p. inclusive within UK (Overseas inc. 55p. per cassette)

Please debit my Access/Visa card no.

Tele Sales (0276) 684959

Expiry date ____________

Access VISA

Trade and Export enquiries welcome. Lifetime Guarantee.

Please send to DIGITAL INTEGRATION

Watchmoor Trade Centre,
Watchmoor Road,
Camberley, Surrey
GU15 3AJ

THE PLANETS

Ah, the sun drenched shores of Jupiter, the storm tossed majesty of Mars. . . the sheer boredom of a wet weekend on Pluto.

In **The Planets** — a package tour of several small games rolled into one — you're the lucky commander of a spaceship cruising the solar system in se :ch of adventure. Your mission to visit planets and hunt out mysterious deadly capsules, open them and put the clues together to save the world. This Cook's Tour calls for a variety of skills, and leads into the first game of the bunch, how to land successfully. The Explore icon leads to a **Surface Lander** option which calls up a map of the approaching planet, a glowing block indicating your target. Yep! This is like **Lunar Lander**!

The aim is to balance the rate of descent with fuel consumption. You have to hit the ground at less than 20 metres per second so you conteract gravity with thrust. That's fine but if you use too much Esso you'll never get back up to 10 kilometres and the waiting Tractor Beam.

Out in space you're likely to encounter the odd shower, but don't bother with your umbrella because it's meteors. In fact it's an **Asteroids** shower as that age-old arcade classic makes a welcome reappearance, endangering extra-terrestial travel. Suffer enough damage and the only place you'll get repairs is Earth.

FACTS BOX

Combines a few old ideas with some nice graphics. For thinkers rather than trigger happy universe savers

THE PLANETS
Label: Martech
Memory: 48/128K
Joystick: Kempston, Sinclair

Reviewer: Jerry Muir

★★★★★

When you're safely on the surface you'll want the other Explore icon, which chooses your Robot. Unluckily its graphic capabilities aren't as sophisticated as the travel brochure picture of the planet that first greets you. All you get is a colour-coded pattern of squares to indicate the type of terrain.

Your three robots are controlled rather like Logo turtles, with forward and turn commands, rather clumsily effected from the ubiquitious icons. Keep track of your movements or you could get stranded on Saturn which would be a real pain.

You get three surface scout robots but only one lander so be careful or you will experience that terrible 'The Earth is doomed. . .' message with its unspoken conclusion '. . .and it's all your fault'.

You may wonder how you're ever going to find a way into the other capsules. That uncanny good luck seems to have deserted you (ie the instructions don't give you any more hints!).

Time to power up your on-board Spectrum and play **Weird**. Never has a game been more accurately named. **Weird** looks like Jeff Minter at his most manic. It's a sort of psychedelic **Grid Runner** game with lots of coloured blocks. I've got as far as the fourth screen, but don't ask me how or why.

The Planets is a novel combination of older elements (**Lunar Lander, Asteroids, Moonbuggy**) making up a unique whole. It's not the most action packed game, though concentrating more on scientific credibility and simple simulations of the strategy of controlling a space craft.

ARCADE REVIEW



ROCK AND WRESTLE

If you've ever wanted to beat Giant Haystack or Big Daddy at their own game, then here's your chance.

Fresh from its success on other micros comes Melbourne House's **Rock 'n' Wrestle**, an attempt to do for the grunting, sweaty passion of wrestling what **Way of The Exploding Fist** did for Kung Fu.

You control one of two fairly sizeable sprites — representing the Masked Terror, or the Pink Punk — and you have to wear down your opponent by variously nutting him, punching him in the fundament, and throwing him to the floor.

Each of these manouevres, if executed properly will, score you points and, reduce your enemy's energy level.

If you are playing the computer, beating the first opponent means you move on to the next challenger, who is of course tougher, meaner and graphically different. So far I've seen a punk with a mohican (bit like that twerp from *Sigue Sigue Sputnik*), a real weirdo with a wizard's hat and a black beard, and someone who looks like *Dallas'* very own JR.



Movement is either via keyboard or joystick, and is fairly standard left/right up/down. Performing any of the offensive actions involves getting close enough to your opponent to smell his breath, then pressing fire followed by one of the movement controls. This results in your character reaching out and hopefully hurting someone.

As yet I haven't worked out if particular moves score more points, but so far I've got a neat line in instep stomping.

There is a two player-option, and which I recommend for practising — your foe stays still, and you can sneak up on him.

The graphics are reasonably good, although at one point I did notice a disembodied head appearing for an instant in the centre of the ring as I was being jumped on in a corner. Still, they do say that being kicked in the head with sequinned boots for any length of time tends to make you see things . . .

Rock 'n' Wrestle didn't grab me straight away but now, after a while, I have to say I suspect I will be persevering with it.

FACTS BOX

A decent game on a fairly unusual subject. If you're a sports fan, go for it: if not, it could be a grower

ROCK 'N' WRESTLE
Label: Melbourne House
Price: £9.95
Memory: 48K
Joystick: Kempston

Reviewer: Gary Rook

★★★★☆

WORK-OUT REVIEW

PLANTER'S GUIDE

I strongly suspect that the particularly tenacious bind-weed which haunts my borders is the real brains behind **Planter's Guide** — a database program intended for gardeners. What to plant. Where to plant it.

It will be twisting its heart-shaped leaves around my defenceless honeysuckle while I am waiting for the tape to yield that final elusive portion of Spectrum code (it lurks just beyond the horrendously long Commodore code).

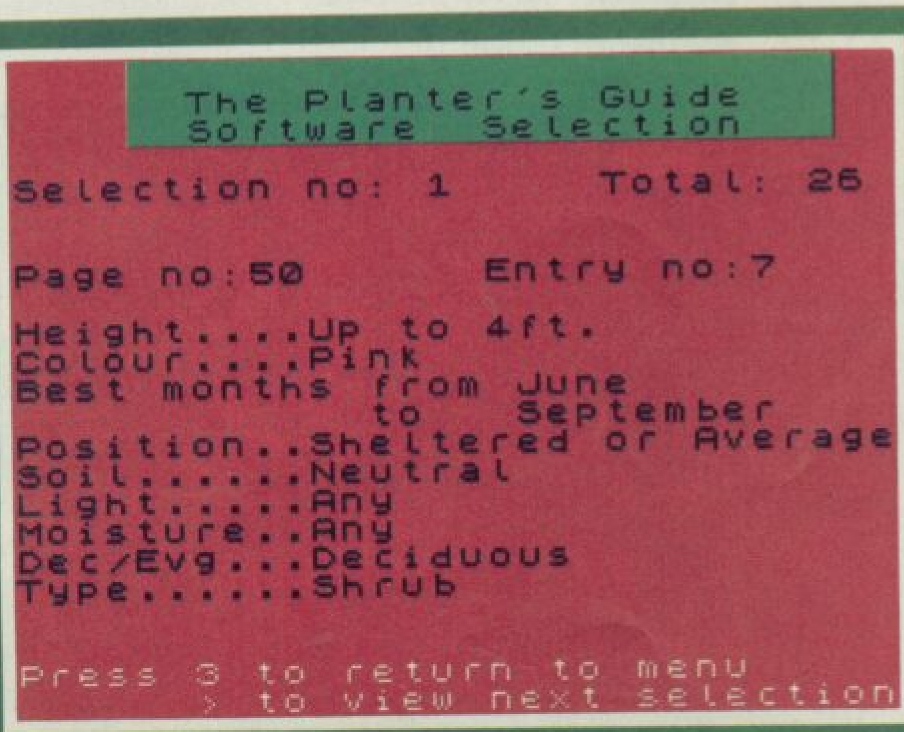
And the bindweed will revel in the vast acres of space left in my tiny plot by the time I have pulled out all the plants which apparently — according to the **Planter's Guide** — have no right thriving in my garden at all.

Sad to report that out of the 1,000 plus shurbs, conifers, heathers and climbers featured in the **Planter's Guide,** only two actually make the grade for my back-garden.

The fact that I am not writing this from the barren wastes of the Kalihari but the midst of England's prime agricultural belt in East Herts, says something for the limitations of the program. Especially as it was concevied and written in the same County.

The guide purports to offer help in selecting plants which match your garden conditions. And is backed up with a chunky 130-page book giving 40-word descriptions of the many plants to choose from.

By keying in a page number and the number of the entry it gives a read-out on the screen of the height the shrub aspires to, the colour with which it will adorn your hedge-row and when to expect it to be at its best.



FACTS BOX

To plan a garden you need pictures. A good book would do the job far more effectively and cheaply

☆	**PLANTER'S GUIDE**
☆	Label: Phoenix
☆	Author: Barry Tyler
★	Price: £14.95
★	Memory: 48K Reviewer: [signature]

It will also suggest the conditions in which it will thrive: sheltered or exposed sites; sunny or shady conditions; moist or dry or chalky or acid soil and, finally, the type of plant it is.

The book description adds to this — but crucially it provides no pictures.

Alternatively you can use the program the other way around entering the conditions in your plot and seeing what the program recommends.

Computers being the unforgiving creatures they are, there is little flexibility and the variety of conditions which can be found in a garden are not so easily pigeon-holed. I have no doubt that author, Barrie Tyler has his information correct but, largely because the **Planter's Guide** is so inflexible in use the package is unlikely to please either gardener or computer buff.

WHAT I WANTED

*It's sad the **Planter's Guide** didn't come up to scratch. My ideal imaginary **Garden Designer** uses Psion's date compression techniques from **Scrabble,** allied with Mike Singleton's landscaping craft from **Lords of Midnight**!*

You, the gardener, input your garden dimensions, draw in the size and shape of the plant beds and show changes of level where they occur and a 3D representation of the garden appears on screen. Choosing plants from the extensive list, you use your cursor to position them in the garden and hey presto it is drawn in, height, shape and outline. Gradually you build up the garden with shrubs, conifers and climbers until all the beds are full and the trees have been planted.

*All this is hoping for the moon but some sort of intelligent database was definitely called for with the **Planter's Guide.** Where the computer program could have scored over any of the colour guide books — and where this one didn't — is on the creative side. It would be fun to sit indoors on winter evenings and plan graphically your ideal garden, experimenting with different layouts, plants and shapes. Even a simple plan-view option to lay out the garden would have been terrific.*

ACTION! ACTION! ACTION!



Biggles

Packed with all the action and atmosphere of the movie, Biggles is a multipart game that'll keep you on the edge of your seat right to the end of your mission.

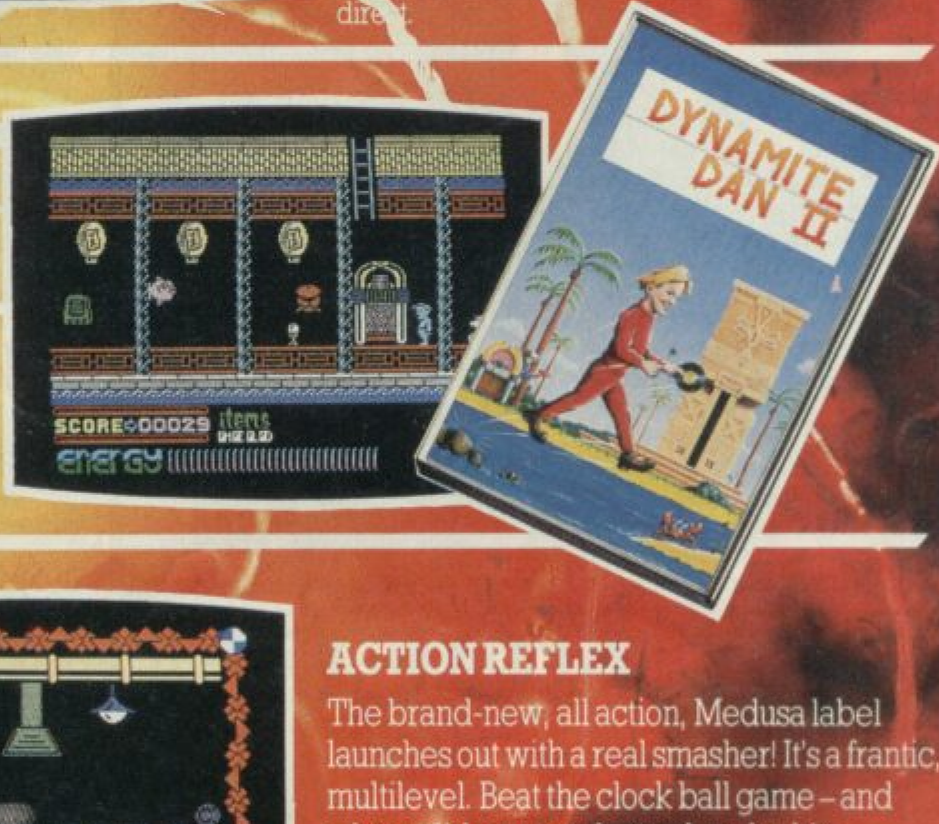
Spectrum · Commodore 64 · Amstrad CPC £9.95 tape
Commodore disk £12.95 · Amstrad disk £14.95

Biggles t-shirts, pilot's scarves, button badges and stickers available too – ask your retailer or call us direct.

DYNAMITE DAN II

Dynamite Dan's back – and how! There's 200 screens of challenging gameplay, simply crawling with intelligent aliens out to trap you, to keep you on your toes (which will be tapping like mad to the amazing music, too!)

Spectrum £7.95 tape





ACTION REFLEX

The brand-new, all action, Medusa label launches out with a real smasher! It's a frantic, multilevel. Beat the clock ball game – and where did you see that red-and-white chequered ball before...?

Spectrum £7.95 tape

STRIKE FORCE HARRIER

Fly by the seat of your pants at the controls of the Harrier, one of the world's most exciting combat aircraft. But beware of enemy ground and air attack as you battle your way to your ultimate target.

Spectrum · Amstrad CPC · BBC/Electron £9.95 tape
BBC disk £12.95 · Amstrad disk £14.95



MIRRORSOFT

Purnell Book Centre, Paulton, Bristol BS18 5LQ Tel: (0761) 413301

ARCADE REVIEW

SPLITTING IMAGES

Have you ever wanted to rearrange someone's face? Well, here's your chance.

For starters, you can put Reagan's mouth where it ought to be. As for the Iron lady, she's got metal fatigue and gone to pieces.

In Domark's **Splitting Images** (nothing to do with the hit TV series). You've got to piece together parts of famous faces — like one of those sliding block puzzles. The idea sounded awful to us, but then, we wuz wrong. Its fast, addictive and very, very fast.

You start off with a blank screen and waiting behind the scenes are a number of picture squares which make up the portrait. Bring them on to the screen and arrange them in the right order before your time runs out. Sounds easy? Wait till you try it. Apart from being fast there are additional bogus and bonus squares. Some have to be got rid of instantly, like the bombs. Otherwise, someone's carefully constructed head is liable to go up with a bang. Brains all over the place YUK!

In fact the bombs can be doused with the water tap to earn bonus points. Likewise, match the pistol and bullet for a higher score. Don't light the fuel with the match though, or you'll get singed. Push the American flag into the Russian one for extra points. Other objects include a hammer, ice cream and diamonds. Some good, some bad, throw them into other objects and see what happens.

To get rid of the bogus squares, line them up with the sliding hatches in the wall, and chuck them out when the doors open. The squares will then rush round and join the end of the queue to reappear later.



FACTS BOX

Let's not split hairs: this is pretty fast. Much better than expected, in fact. Domark back on form

SPLITTING IMAGES
Label: Domark
Author: Ernieware
Price: £7.95
Memory: 48K/128K
Joystick: Various

Reviewer: Clare Edgeley

★★★★☆

The problems start when the screen is almost full, then it becomes almost impossible to shunt round the squares before the time runs out. Try to complete the bottom of the picture first and move upwards and try not to block off the sliding hatches. Watch out for the cracks in the wall, these act as springs and repel all squares if they are placed head on. Approach from the side and slide the squares into position.

There's a time limit on each screen and they can be fiendishly tight, especially with characters that come later on in the game. Ronnie and Maggie come first — which must be some sort of political statement. For Ron you have to knock out the Russian flags with the American flags. Then for Maggie you hammer the Labour symbol with the Tory symbol. Dodgy stuff. For each character the objects change, though the bomb is constant throughout.

On hearing the title, **Splitting Images**, I wondered what was in store for me when I loaded up. After the disappointments of Domark's **Friday 13th** and **Friday 13th** and **View to a Kill** I was fully prepared not to like it.

The game however, is very fast, very difficult and very playable.

BOUNDER

Bounder almost gives you vertigo just to play it. Imagine you're in a helicopter looking straight down on the patchwork of the landscape and there's this ball bouncing up and down underneath. The ball gets bigger as it bounces up, disappears to a dot as it falls away, and rebounds up again.

The theme to **Bounder** is as old as the hills, yet Gremlin Graphics has presented it in a highly original way. Instead of the old bouncing ball off the platform routine, you play from on high — bouncing through landscapes of stone walls, mountain ranges and other unrecognisable landmarks. Your route is easy to spot — just land on the hexagonal slabs and you'll be OK. Bounce on anything else and it's 'Splat!'

There are 174 scrolling screens, chock-a-block with nasties and tortuous routines. Beware the missles, the moscita birds (the what birds?), the binoculoids, manic teeth in the shape of chomper domes and stickits!

After a few false starts you'll work out the safest route on each level and here the pause button comes in handy if you want a breather. You begin with seven balls and 40 jumps and pretty soon you discover they decrease and increase (respectively) at every question mark you come across in the terrain. These give mystery bonuses, and you are as likely to lose ten jumps as gain two balls when you land on one. It's a question of luck. The arrows you find are more useful and enable you to take longer jumps over the jumbled landscape terrain below.

Though a joystick makes life easier, the keyboard gives greater control and, it seemed, extra bounce for both forward and backward moves.

At the end of each level is a simple bonus screen — mostly an excuse to amass huge scores. When you get to this screen just bounce around landing on all the question marks, each of which is worth a certain amount. There's nothing to avoid, and it seems to be purely a matter of luck as to how much each question mark is worth. Very hit and miss and very boring.

Contrary to my initial expectations, I found **Bounder** to be quite addictive and not the walkover I expected. The vertiginous veiw and bouncing ball make for an original format. And the dratted ball never seems to land exactly where you want it to. It's quite fun learning how to control it, whizzing around and trying to leap on to the arrows and question marks in the more inaccessible parts of the screen.

Bounder's the type of game which is great for a little mindless relaxation — good in short bursts.



FACTS BOX

A clever idea and the unusual perspective add to the playability. Mindless fun. And wots wrong with that?

BOUNDER
Label: Gremlin Graphics
Authors: Quiet Bunch
Price: £7.95
Memory: 48K
Joystick: various

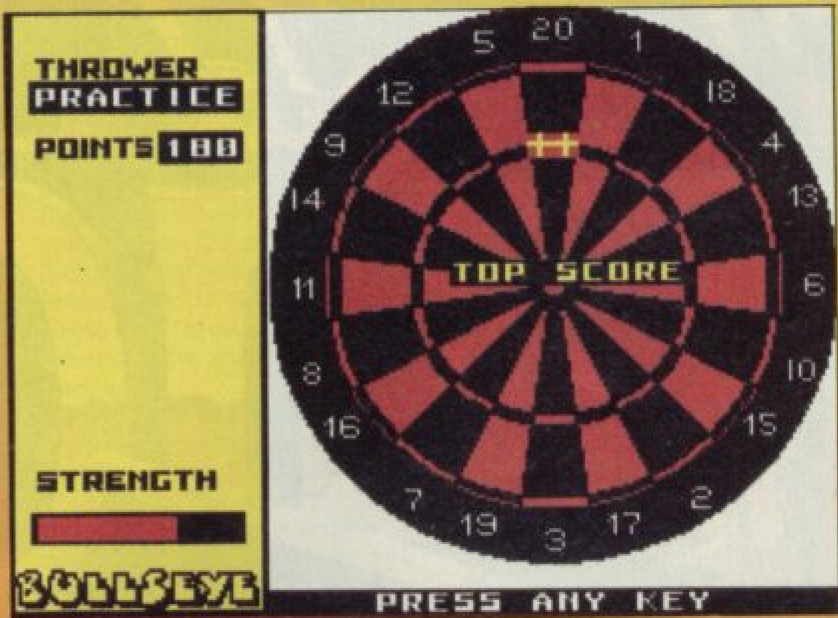
Reviewer: Clare Edgeley

★★★☆☆


ocean
ULTIMATE
PLAY THE GAME
U.S. GOLD
All American Software
They sold a
MILLION
They sold a
MILLION
II
BRUCE LEE
PSION
match point
MATCH DAY
The Hit SQUAD
4
MONSTER
HITS IN
1
GIANT
PACK
The Hit
SQUAD
STRIKES AGAIN
ALL THESE
BLOCKBUSTERS
TOGETHER ON ONE
GIANT
COMPILATION
SPECTRUM £9.95
AMSTRAD £9.95
COMMODORE 64 £9.95
DISC £14.95
[COMMODORE and AMSTRAD]
Stocked at Selected Branches of:
ENTOMBED REPLACES
KNIGHT LORE ON
THE COMMODORE 64
MORE FOR LESS
from...
The Hit SQUAD

ARCADE REVIEW

BULLS EYE



I've only ever caught sight of the *Bulls Eye* TV programme when flicking through the channels — and the sight of the gravel voiced compere was enough to make me flick further immediately!

The one idea that fills me with horror, more than the thought of watching darts, is a quiz show based on the game.

I approached this computer version then with trepidation. Would Jocky Wilson suddenly come bursting from my monitor? Obviously they've saved the full bulk of the darts pro for the expanded 128K version (joke — I hope!) because apart from the cartoon bull the only part of 'arrow' throwing anatomy you get to see is a hand.

It's a generally accepted fact that quiz games don't work well on a micro — which has never stopped companies trying. The current title does have an advantage though. The dart throwing means that instead of endless answers and a feeling of déjà vu as they increasingly often repeat, there are far fewer questions to a round but a bit of arcade action to break them up.

This is strictly a two-player game and at the start you each throw to answer from one of ten categories. If your dart lands in the one you've named as your choice then you score a bonus. Each player gets three goes before round two when whoever scores highest on a normal board gets to answer a general knowledge question — a wrong answer passes it to their opponent.

The current winner then throws at a special board, gaining points for hitting a red section once but losing the bonus if they hit it again. Finally comes the gambling round. The leader is given the opportunity to double the score if s/he can score at least 101 with four darts.

This all plays very smoothly with limited fuzzy recognition to allow for typing errors and difficulty levels which adjust the time limit to answer questions.

Darts are thrown by moving a disembodied hand at the bottom of the screen left to right then adjusting the force of the shot to place it on the board. While it's fairly easy to target subjects in Round 1 I suspect that it becomes harder in the later, purely darts rounds.

As with all the Macsen TV spin-off titles, this will be of more interest if you like the programme it ties in with.

I don't but I still found it one of the more enjoyable quiz games I've played. Though it's unlikely to be loaded too often, I'd rather play it than watch the real thing!

FACTS BOX

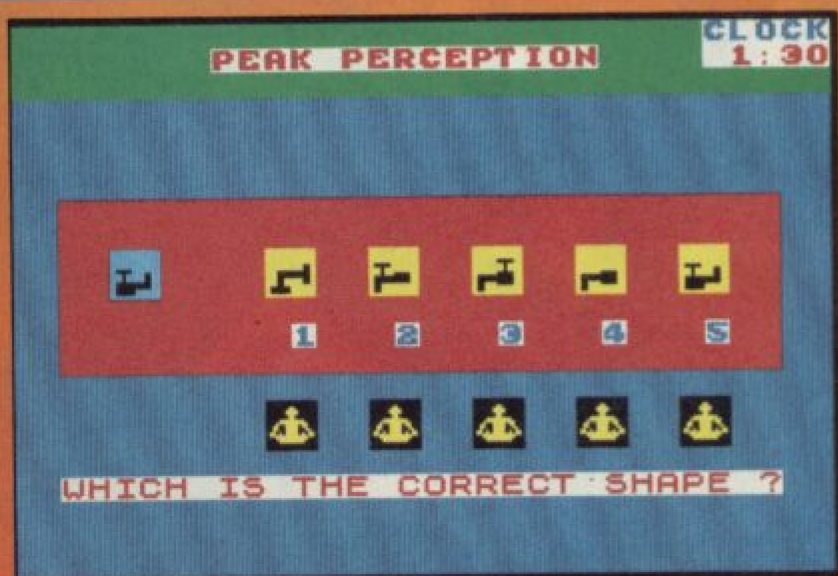
Macsen specialises in computer versions of TV game shows. Some are dire — this is surprisingly good

BULLS EYE
Author: Macsen
Price: £00.00
Memory: 48K

Reviewer: Jerry Mair

★★★★☆

SECRET OF LEVITATION



You want weird? We got weird! A computer program that evaluates your levitation potential!

Americana is the label but it sounds more specifically like California, home of cults and kooks.

To be a successful levitator you'll need a perfect balance of mind and body — plus the ability to sit in the all important aerodynamic lotus position. The nine games here test your hand and eye — you're left to your own devices when it comes to the contortions.

Test Number 1 is Rapid Reactions. Four figures sit side by side. Immediately one vanishes you transfer your finger from the Z key to the number of the absent aviator. Next up is Vibrant Visions because every levitator needs a highly developed nervous system. This time you have to say which of two lines is longer, the problem being that you only see them for fractions of a second.

Hand—Eye Harmony is a handy test of how well your body responds to your brain. A small target blips round the screen while you try to keep a similarly small character as close as possible to it. Peak Perception is simple, matching one object with its identical twin in a row of five, aiming for lightning recognition.

Ten mazes provide a test of Mind—Body Mastery as you race to complete their tangled paths. You'll also need Agile Alertness if you're indulging in man-powered flight. This a variation on speedy shape recognition so be alert — the aviation world needs more lerts! Of course Inner Integration can't be omitted and it's tested by tracing out a simple shape hidden in a web of lines.

And so the tests keep on coming.

After each one you see your master, Sidha, sitting cross legged and as your score clocks up he starts to float. At 700 he's looking good, radiating the energy of the Unified Field.

At 800 and it's off with the physical and into his ethereal togs in preparation for scores of 900 plus when he zooms off the top of the screen for a little heavenly cruising.

You also get a Levigram graph of your total scores to give you a unified picture of your potential for flying with the Red Arrows without a plane.

There's no great overall reward — though I suppose anybody scoring top marks will be walking on air.

A totally bizzare collection of abstract games, all presented in a tongue in karma fashion (at least I hope it's not meant to be educational).

Not perhaps the most addictive release ever but it's a highly playable, silly way to test your basic mental and physical skills.

FACTS BOX

A weird one, this. Fun if you like tests and the levitation angle gives the the whole thing a neat lift

SECRET OF LEVITATION
Label: Americana
Price: £2.99
Memory: 48K
Joystick: Interface II, Kempston, cursor

Reviewer: Jerry Mair

★★★★☆

ARCADE ★ REVIEW

PENTAGRAM

There was a time when the release of a new game from Ultimate was a major event. A time when it seemed Tim Stamper and his team could do no wrong.

Certainly **Sabre Wulf, Underwurlde, Knight Lore** and **Alien 8** must rank amongst the best games for the Spectrum ever. So what of the latest release from Ultimate, **Pentagram**? Can it make up for the extremely disappointing **Cyberun**, which marked a retrograde step, using **Jet Man** style graphics?

Well, I'm afraid that the answer is a resounding maybe.

Pentagram is in fact a slightly changed version of **Knight Lore.** 'So what', I hear you cry — **Alien 8** was too, and that's great.

Maybe it's OK to copy your hit once. But twice?

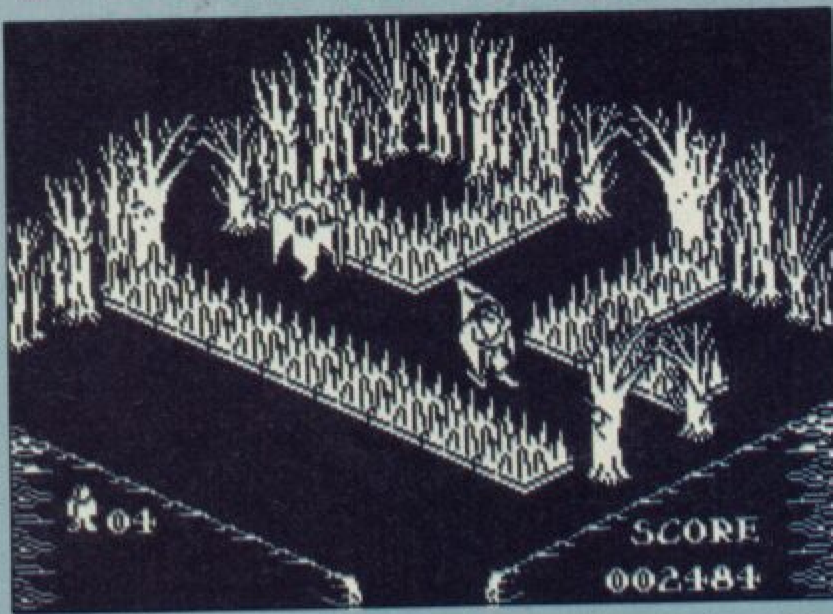
Alien 8, while sharing a common graphic style and underlying structure, had a totally different plot line and very inventive screens, all high-tech space ship backgrounds and angular robots as opposed to the gothic medievalism of **Knight Lore**.

Unfortunately **Pentagram** looks like some poor minion has been handed Ultimate's Graphic Adventure System, shown **Knight Lore**, and told to deliver a best selling game by the previous Friday.

I may be being unfair but the graphics certainly look rather simplistic compared to the other two games. Our hero the Sabreman is wrapped from head to foot in a cloak, which avoids the need for any fine detail. Not only that but the monsters are distinctly disappointing — spiders with stubby legs, rather primitive looking sheet style ghosts, and distinctly dull Frankenstein monster look-alikes.

The backgrounds, too, seem to be lacking in imagination, being basically rehashed from **Knight Lore**: the furniture has been changed, but only slightly — sawn off tree trunks replacing chests, and giant man traps instead of enormous spikes.

As for the problems, we've seen them before: None of the 'how the hell do I get through this?', more 'ho hum, another one of those.'



▲ One of the early screens ● The ghost can't hurt you but it can block your way ● Avoid the spokes — they're deadly ● And don't hang about, assorted creepy-crawlies will materialise in the room

The only major difference in **Pentagram** is that you are at the mercy of wandering monsters as well as the inhabitants of the rooms: if you stay somewhere too long, a new creepy crawly materialises. Some of them are more dangerous than others — the ghosts just push you around, while just about everything else zaps you if you collide with them.

The addition of these roving killers makes it very difficult to survive at first — which is obviously the idea.

But, cynic that I am, I can't help feeling that it's another example of the laziness that seems to underlie the game — make it more difficult by adding more monsters which appear randomly and you don't have to bother with designing elegant puzzles.

What the plot of the game is I really can't tell you, beyond saying that it has something to do with searching for a mystic pentagram, and that somehow you will be able to get clues and/or help from the various wishing wells dotted about the game.



▲ The witch will zap you if you collide so watch out ● Push the table under the hovering flagstone ● Then jump first on the table, then the flagstone and you'll find another exit

Not as difficult as it looks ● The dragon's heads move up and down but don't seem to come any further than the line of man-traps ● Carefully push the tree stump towards one of the heads then quickly jump up on to the stump ● Then you can jump into the enclosed area to reach the wishing well ▼



FACTS BOX

Technically very good, but lacking in imagination. Sadly, it's another serious dissapointment from Ultimate

☆	PENTAGRAM
☆	Label: Ultimate
★	Price: £9.95
★	Memory: 48K
★	Joystick: Kempston
	Reviewer: Gary Rook

Basically, it all boils down to a matter of invention. Two's company, three's a crowd and there's nowhere near enough new material in **Pentagram** to excite me. Of course, it has to be admitted that it is far better than many of the run-of-the-mill Spectrum games around. The question does remain, though; How long can Ultimate rely on being the only company in the market capable of sophisticated graphics like this?

If they want to get back in the lead, they're going to have to bring back the sense of wonder that their best games invoked in people.

ARCADE ★ REVIEW

TRICK OF THE TALE

1. This is a a) budget game; b) normal price; c) vastly overpriced: [c]
2. It is a) wholly original; b) slightly similar to something else; c) yet another **Manic Miner** clone: [c]
3. It has a) lots of screens; b) lots and lots of screens; c) lots and lots and lots of screens; d) only 15 screens: [d]
4. Which will a) test you beyond endurance; b) take months to complete; c) be a blessed relief: [c]

FACTS BOX

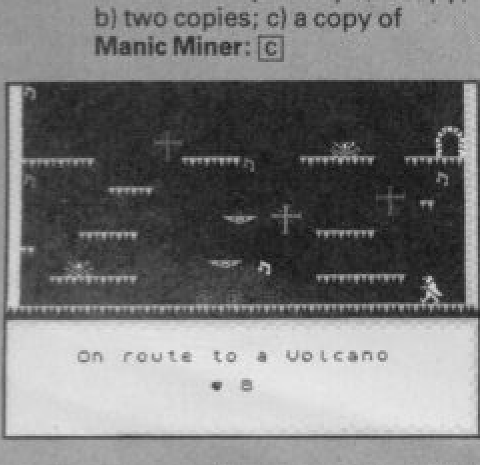
How many of these Manic Miner look-alikes must we endure? The trick is don't buy it

TRICK OF THE TALE
Label: Central Solutions
Author: Greg Holmes
Price: £0.99
Memory: 48K

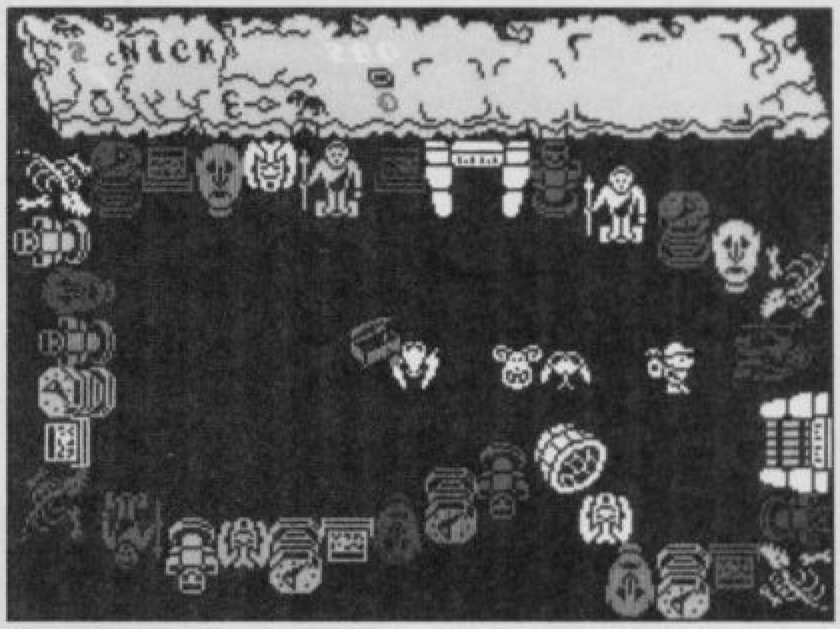
Reviewer: Jerry Muir

★★☆☆☆

5. There are a) lots of controls; b) no controls; c) three controls: [c]
6. Which will make it ideal for a) people with lots of fingers; b) people who are into pretentiously conceptual games — Hi, Mel; c) people whose keyboards no longer work very well: [c]
7. My reaction was a) amazement; b) apathy; c) Zzzzz! [c]
8. Don't delay — buy a) a copy; b) two copies; c) a copy of **Manic Miner**: [c]



LABYRINTHION



Remember when Ultimate meant Play the Game, not Deja Vu? Remember how we all thrilled to **Atic Atac** and went wild over **Sabre Wulfe**? As the Ashby team went 3D, out came **Wizard's Lair** from Bubble Bus — sort of **Wulfe** in the **Atic**. It was immensely playable and cheaper than the Ultimate titles.

The process of evolution being what it is, the inevitable result of this progression is now a cut-price **Wizard's Lair** — a **Wizard's Studio Flat,** if you will. Its title is **Labyrinthion** and it's set in a labyrinth — which shouldn't a-maze you.

There are nine parts of a scroll scattered around the screens and it's your task to pick up the mystical waste paper. The maze divides into five sections and to pass from one to another you'll need a number of objects — four compasses,



maps, water bottles or hour glasses. Delivered to the drop point these will make a key appear somewhere within the sector and that will open the necessary doors.

Inevitably the caves are alive with nasties. For protection from frogs, rats and the rest there are fly swatters, buckets and mouse traps and you also have two weapons to defend yourself against the strength sapping vermin. Weapons can be replenished from the fill point and changed with the *F* key.

It's a busy scenario but it over-reaches itself. If this had been nice and simple it might have provided a pleasing diversion. As it is, it's often confusing and difficult to get into with a horribly unclear status panel.

When it eventually crashed I wasn't desperately surprised and certainly felt no desire to reload. If evolution is survival of the fittest, this review is an obituary.

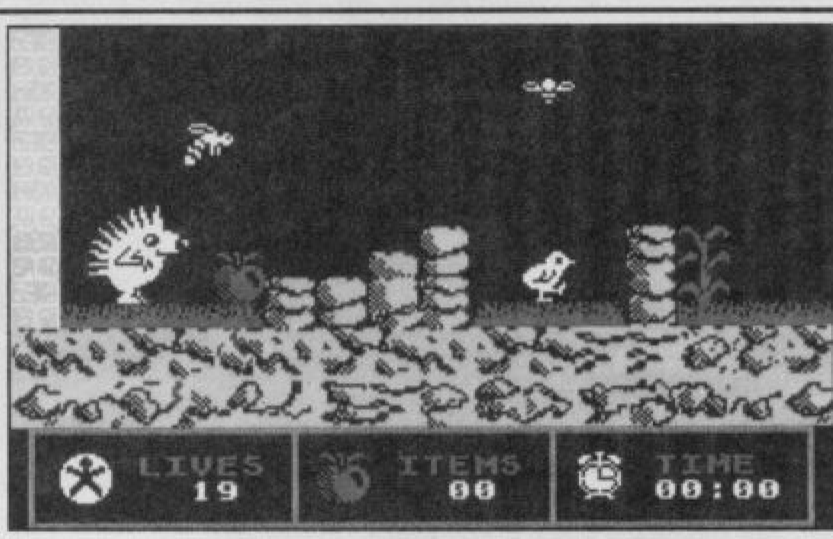
FACTS BOX

A reminder of the old Ultimate Atic Atac days. Now that kind of things sells as budget material

LABYRINTHION
Label: Budgie
Price: £2.99
Memory: 48K

Reviewer: Jerry Muir

★☆☆☆☆



SPIKY HAROLD

Who'd be a hedgehog? When you're not being squashed by speeding cars you're appearing in budget computer games!

Spiky Harold is subtitled, 'Goes Hibernating', which sounds about as exciting as watching paint dry.

It transpires that the game isn't so much about sleeping as preparing for that long winter lie-in. Harold has to gather a store of food in case he should feel peckish around mid-January. This can mean but one thing — it's a collecting game.

In its favour, **Spiky Harold** is well designed with nice big sprites, a colourful system of caves and one or two cleverly designed screens, such as the one where you'll slide straight back into the path of an on-coming nasty unless you leap forward again immediately on reaching the ledge. There are also some nice touches, such as the ferocious munch as Harold bites into a tasty morsel.

There's also a time limit. In 24 hours the first frost of winter will set in and you have to guide Harold back to base before the big freeze.

There are 57 objects in all to collect, including the coins which give extra lives and the wine glasses that make Harold drunk. Being in charge of an inebriated hedgehog is no joke and for a while you'll find he does exactly the opposite of what you command him to.

It's another timely release from Firebird — hibernating just as the summer is coming on. Remember, it was Firebird that launched **The Comet Game** after the comet had gone!

Spiky isn't brilliant, but it is cheap.

FACTS BOX

OK, so it isn't earth-shatteringly original. But there are worse programs at the price

SPIKY HAROLD
Label: Firebird
Author: A Rogers
Price: £1.99
Joystick: Kempston
Memory: 48K

Reviewer: Jerry Muir

★☆☆☆☆



For 48k ZX Spectrum
and 128k ZX Spectrum (in 48k mode)
CASSETTE = £9.95
For mail order send a cheque/postal order to Hewson Consultants Ltd. Order by credit card by sending your Access/Barclaycard Number, and enclose a specimen signature. Don't forget to enclose your name and address.

Penetrate the Portals of Pyracurse

Probe the evil of the Inca curse — discover the lost tomb of Xipe Totec, the Sinu God. Adopt the characters to manoeuvre through the depths and darkness of tombs and crypts. Guide the tired and emotional Legless O'Donnell, the drunken reporter, archaeologist Professor Roger Kite, fiancee to the provocative Daphne, and the mischievous dog Frozbie, in their battle to save Daphne from the devastating curse of the ancient South American God Xipe Totec — Their success depends on you . . .

Pyracurse is a unique development featuring an isometric 3-D projection with full hidden object removal and high speed multi-directional scrolling.
Another fantastic adventure brought to you by Hewson.

HEWSON

56b Milton Trading Estate, Milton, Abingdon, Oxon. OX14 4RX

Hewson Consultants Ltd
As part of our continuing development of innovative software we are always happy to evaluate software sent to us with a view to publication.

ARCADE REVIEW

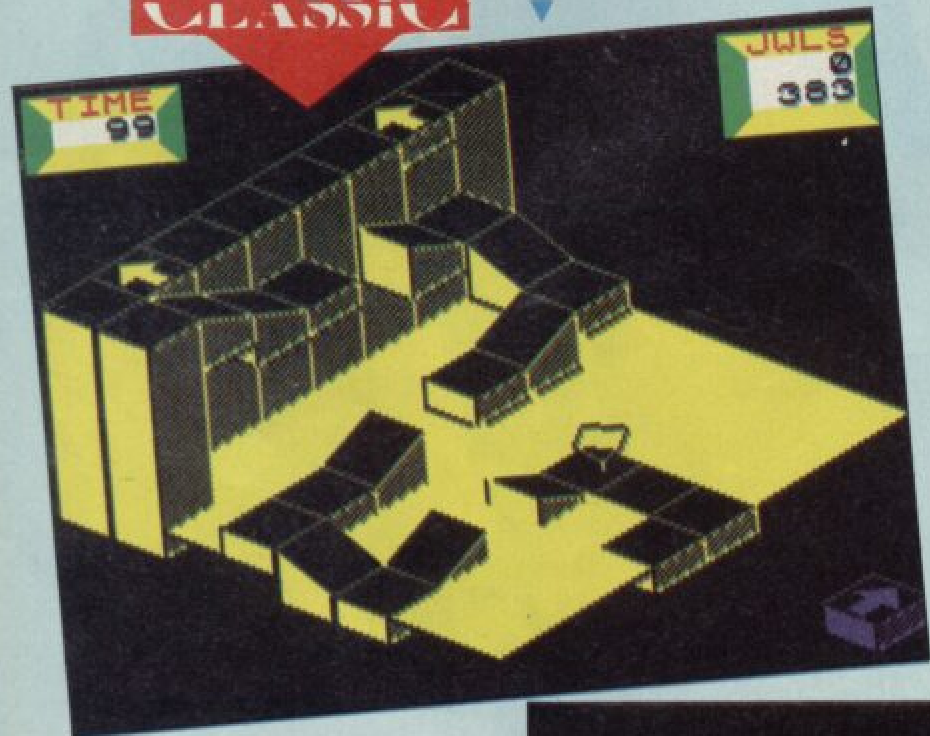
SPINDIZZY

If you like games that simultaneously tax your intellect and exercise your joystick hand, then you're going to love **Spindizzy**, the latest from Electric Dreams.

You, as Trainee Assistant Cartographer for Unknown Worlds, have to boldly go where to TACUW(!) has gone before, and use your remotely controlled scout craft (or Geographic Environmental Reconnaisance Land-mapping Device — GERALD for short) to explore a weird and wonderful landscape, full of fiendishly clever puzzles.

Gerald can take two forms — either a gyroscope or a ball. Whether there's any advantage to being one or the other I have yet to discover.

SINCLAIR USER CLASSIC



An early challenge ● You have to use the fire button to pick up speed, otherwise you won't clear the gaps ● Be ready to hit the freeze button though — you need to stop on a sixpence! ● Don't go south — you'll get wet ● To the west are lots of very weird screens with heaps of gems — if you can get to them

Anyway, your mission is to guide Gerald round an immense obstacle course, avoiding various hazards (of which more later) and collecting gems. Don't be fooled by the first screen, or by the 'beginners section' which lies to the east of it: most of the rest of the screens are guaranteed to give you brain-ache.

Each screen is eight squares square, like a chessboard, if you see what I mean, and in the early screens — the start screen and the beginners section — all of these squares are solid ground, which means that you can dash about all over. On later screens, though, you have to be very careful as the path can narrow to only one square wide, with voids of space waiting to either side.

Nor is the play area confined to only one plane; on some screens you can trundle along on two or three different levels.

Getting from ground level to the first floor is often achieved by going up a slope. Sometimes you have to use one of the many lifts which are dotted around — but to get the lift to work you have first to activate it by moving over a panel on the floor.

These floor panels, of which there are many different types, can also cause other things to happen: on one screen, there are two, and you have to touch both, in the right order, in order to create a path between two pillars. You do get hints, though, which will give you an indication of what type of panel will solve a problem.

Of course, like all the best games, nothing is ever as simple as it seems. There's a time limit — and not a very long one at that. As you fumble through screen after screen, the clock is ticking away. You do get extra time added on for each jewel collected and for each new screen you enter, though. Unfortunately, you also lose it every time you make Gerald do something stupid — like falling off the edge of the world.

You also have to watch out for various odd terrain features, like the ice (which means you can't slow down or stop) and the water (which means you drown).

The problems range from the simple — how to get enough momentum to get up a slope to reach a jewel at the top, without going so fast that you fly off the other side into the voids of space — through the merely difficult — how to get through a maze of passages to collect another jewel — to the downright impossible — how to get from one side of the screen to the other when there's no apparent connection.

To help you, you have a map which shows the way the screens are laid out and where the uncollected jewels are. Unfortunately, mine doesn't seem to.

You have to get through two fairly tricky screens to get this far ● It's not really as difficult as it looks — but you have to keep close to both the fire and the freeze buttons ● You're short on time, though: and remember, every time you fall off, you lose eight seconds ● The best advice is to avoid this screen for as long as you can, so don't go south at the start



You can also change your viewpoint, which is especially useful as on some screens Gerald has a habit of disappearing behind obstacles if you're looking from one direction.

When I first started I found myself flying off the edge an awful lot. Don't be too discouraged, you can learn a great deal about what's on the next door screen. The map only tells you whether there is an area which you might be able to enter next door. If you manage to leap off the side of one screen, you get shown the adjacent screen for a couple of seconds before falling to your doom. This means that you can map it properly and begin to work out exactly how the screens interconnect.

One thing worth remembering is that your fire button speeds you up and the freeze button — the *F* key — stops you. When I started playing the game I didn't know that, which made everything a lot more difficult! Using a joystick it's sometimes a bit difficult to reach the *F* key in time, but even so it's easier than using the keyboard throughout.

To add further confusion there are also some aliens knocking about: all you have to do is avoid them. If they hit you, you begin losing energy.

It's easy to look at **Spindizzy** and say it's another **Marble Madness** type game, following on from **Gyroscope** and **Quazatron**.

But with a fair crop of new twists it is easily one of the best Spectrum games I've played recently.

And for Electric Dreams it's a major improvement on **Back to the Future**.

FACTS BOX

*Arguably the most enjoyable of the **Marble Madness** derivitives so far. Electric Dreams' best yet.*

★	**SPINDIZZY**
★	Label: Electric Dreams
★	Price: £9.99
★	Joystick: Kempston
★	Memory: 48K
	Reviewer: Gary Rook

KIREL



A MEGAGAME! *Your Sinclair — June 1986*

A 'Sinclair User' 5 Star Classic *June 1986*

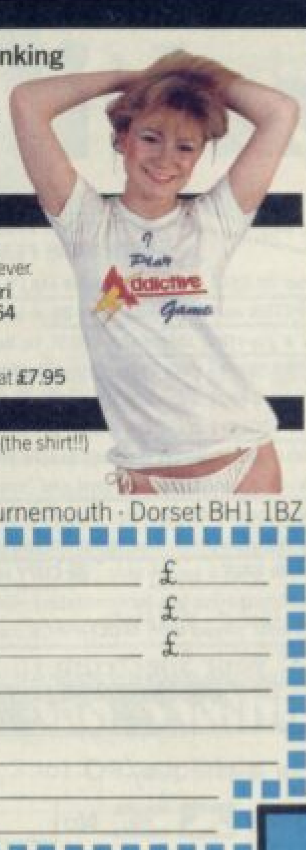
Visually excellent and highly inventive...Kirel is a must. *Popular Computing Weekly 14th May 1986*

Excellent! *Computer & Video Games June 1986*

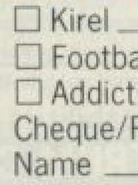
Addictive products can be bought from all good software stockists but in case of difficulty may be obtained direct from us by mail order at the prices shown (UK P&P included but overseas customers must add £1.50).

Access orders can be telephoned through on (0202) 296404.

KIREL the 3D arcade challenge for the thinking player. Seventy mind stretching screens, each one more complex than the previous, but providing its own individual challenge.
£8.95 for the SPECTRUM.



FOOTBALL MANAGER



Still in the charts after four years. Britain's most popular Football Managment game ever. Now available on **Amstrad** at **£8.95** · **Atari** at **£9.95** · **BBC** at **£8.95** · **Commodore 64** at **£8.95** · **C16/Plus 4** at **£6.95** · **Electron** at **£8.95** · **Spectrum** at **£8.95** · **VIC 20** plus **16K** at **£7.95** · **ZX81** at **£7.95**

T-SHIRTS

If you play Addictive games you must want one of these (the shirt!!) Small/Medium/Large or XL – **£4.50** each.

Post to: Addictive Games · 10 Albert Road · Bournemouth · Dorset BH1 1BZ

☐ Kirel ______ £____
☐ Football Manager – *Machine* ______ £____
☐ Addictive T-shirts ______ £____
Cheque/Postal Order/Access
Name ______
Address ______
______
______ Tel. ______

Addictive

• Addictive Games •
10 Albert Road · Bournemouth
Dorset BH1 1BZ · Tel: 0202·296404

ARCADE REVIEW

THE FORCE

'Ello, 'ello, 'ello. 'Ere's a chance for all you trainee Knackers of the Yard to deploy your forces round what appears to be an anonymous London suburb and its four stations in an icon-driven management game.

And it's not easy to keep the criminal classes under control.

The key elements in getting the bobbies on the right beats are the crime rates and the diary. The statistical evidence on types of crime in certain environments should help you cover them successfully (even though you *are* horrendously undermanned . . . continued *Police Review*) though with three shifts a day and four areas to every station that's an awful lot of information to assimilate.

The diary contains those unique events that go to prove the policemans life is not an 'appy one. There's the meeting at the industrial estate or the Saturday Football Match. Will you send extra forces to the ground only to find that the visiting Millwall fans were meek as little lambs while Mr Knuckles and Nosher made off with your next week's payroll?

None of this ignores that thorny topic, police relations. Pile all your plain clothes thugs . . . sorry, best men, into a deprived area and you'll find you've got an image problem.

At the end of every week you get to control the traffic around town. Quite what a top cop is doing on point duty is never satisfactorily explained but if this is the way the commanders carry on no wonder law and order's in the state it is. I suspect this frantic sixty seconds of changing signals is included to get the adrenalin flowing, however sluggishly, after the tedium of a week behind your desk.

Tedium is the word to describe **The Force.** As a game it's more **The Farce.** Unless you're heavily into resource management simulations I bet you won't even get through the manuals for this one. Even though it's dressed up with maps and symbols, icons and scrolling messages, it can't fail to disguise the fact that at heart it's all a series of repetitive tasks.

It all becomes a lot of hard work with far too little variety. The manuals themselves aren't particularly helpful, the pictograms are often puzzling and the nesting of command screens isn't always helpful.

I have no reason to doubt that these are the day to day problems faced by real police commanders and I pity them. But I can't see many games players getting pleasure from such routine unless they're heavily into repetitive bureaucracy.

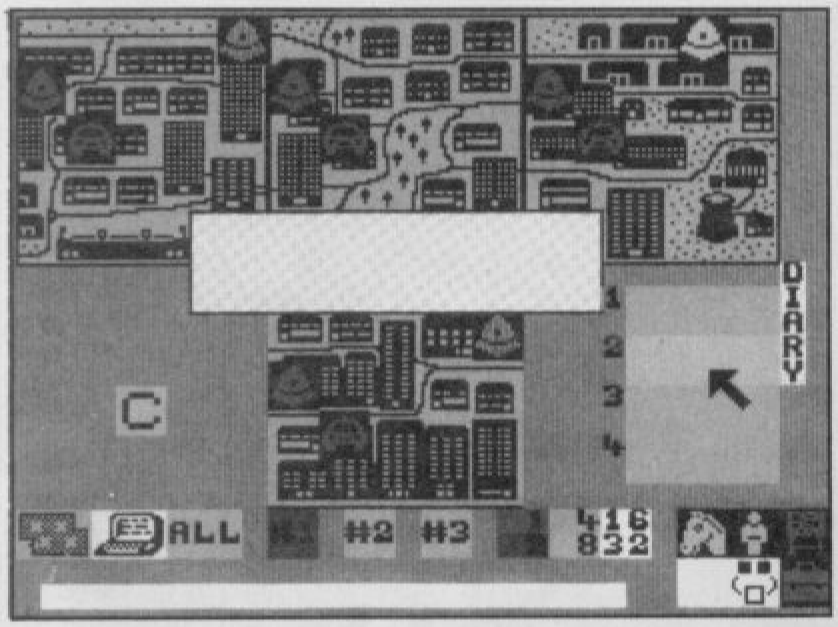
FACTS BOX

Only die-hard fans of management games will be nicked by this one. Mugsy with tears

THE FORCE
Label: Argus
Authors: Concept
Price: £9.95
Memory: 48K
Joystick: various

Reviewer: Jerry Muir

★★☆☆☆



HCCS

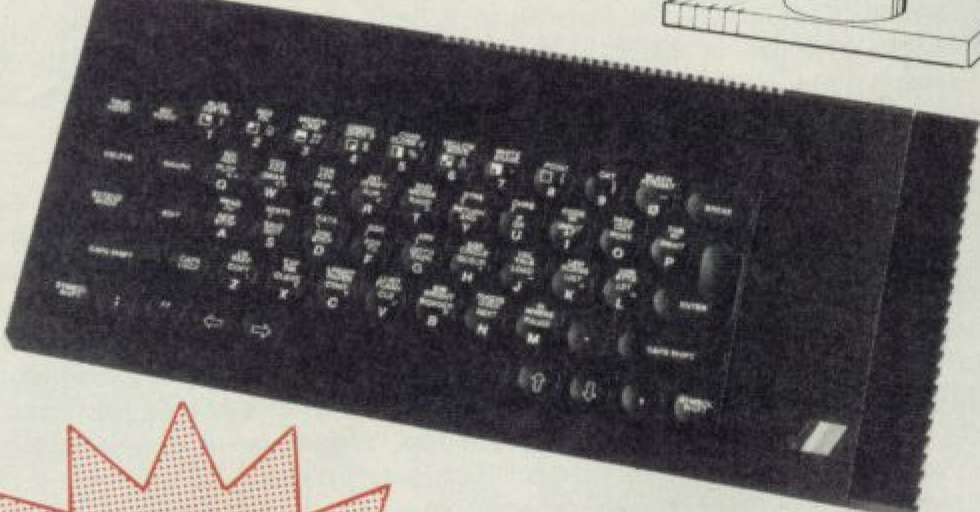
Home and Continental Computer Services Ltd

28 Hitchin Street, Biggleswade, Beds.
Tel.: (0767) 318844 (4 lines)



The Echo musical synthesizer in harmony with The Sinclair 128

The New Sinclair 128



Echo Musical Package
only
£84.90
(save £15.00)
includes FREE Keyboard tutor
Sinclair 128 not included

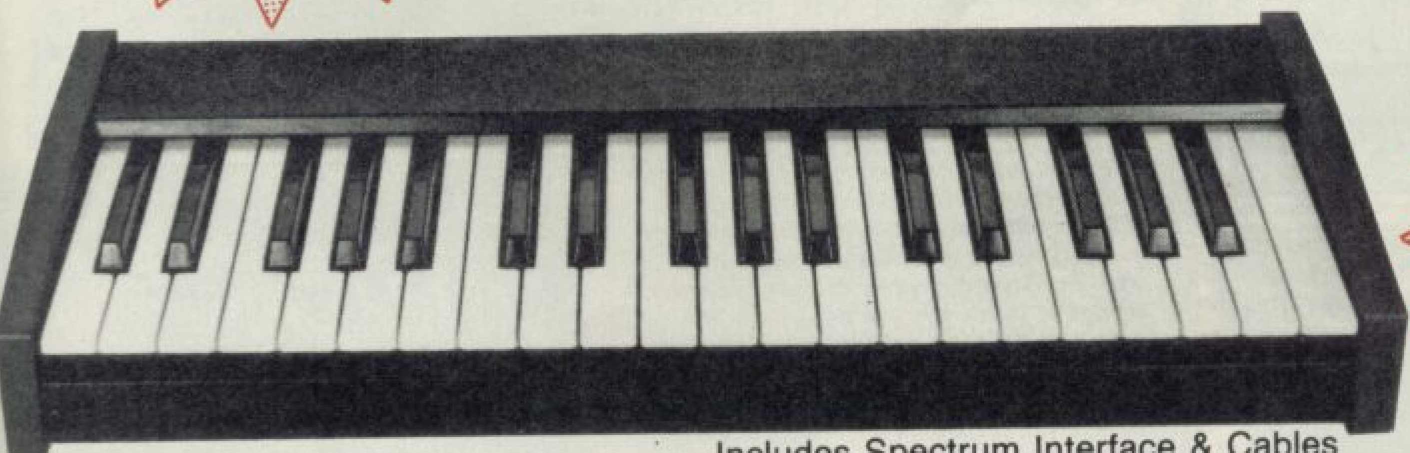
Echosound Speaker/Amplifier

Provides an impressive 5 watts output to its big 6" twin cone speaker, complete with volume and tone control; mains powered.

Only £39.95

includes 2M connecting cable





Includes Spectrum Interface & Cables

coming soon Amstrad version

The Incredible Echo Musical Synthesizer

A musical package for users of all ages. For the beginner or the accomplished musician, the superb touch sensitive Echo keyboard will soon have you exploring the musical possibilities of your micro. Complete with Organmaster in cassette form. A powerful yet easy to use software allowing you to imitate various instruments such as a Piano, Organ, Hawaiian Guitar, Strings (violin) as well as providing a wide range of percussion effects and a synthesizer mode allowing you complete control of the voice envelopes, so you can design your own sounds.

Only £59.95

Sinclair 128	
Echo Keyboard	£59.95
Amplifier	£39.95
*Microdrive/Cassette	
Acorn BBC	
Echo Keyboard	£49.95
Amplifier	£39.95
*Disc 40/80/Cassette	
ROM Version	£69.95
Commodore 64	
Echo Keyboard	£49.95
*Disc/Cassette	

*Delete which is not applicable

Cheques payable to HCCS Ltd.

I enclose a cheque/P.O. for ________ Total

Name ________

Address ________

VAT and p. & p. inclusive within UK
(Overseas inc. £3 per item)
Please allow 28 days for delivery

Or debit my Access/Visa/Diners Account No.

24 hour
0767 316094

HCCS

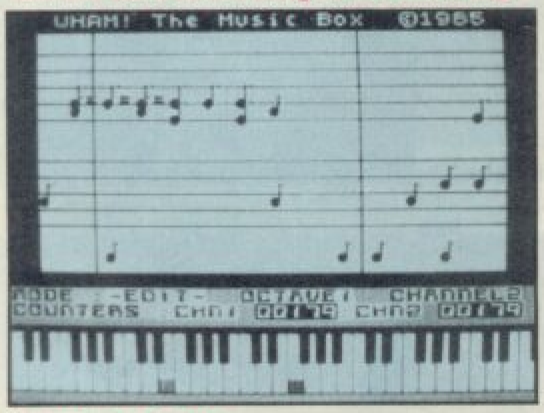
28 Hitchin Street,
Biggleswade,
Beds.
Tel.: (0767) 318844 (4 lines)



Sound software

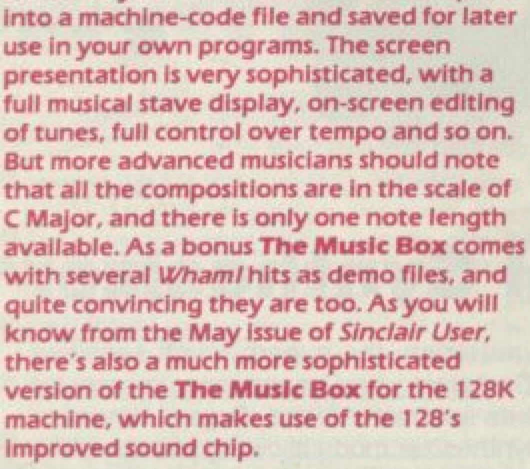
Once you have amplified the Spectrum's *Beep*, using one of the many TV interfaces or user-port amplifiers on the market, you will be able to experiment with composition on your Spectrum. The limitations of Basic are obvious — just commands for pitch and duration. So several software houses have come up with sophisticated software packages to improve the *Beep*'s performance.

● **Melbourne House's WHAM! — The Music Box** allows you to compose tunes which apparently use two voices, and add percussion effects. It's all done through a system of machine-code interrupts which fool the ear into thinking that it's hearing



two tunes at once.

The percussion noises can be inserted into gaps between the musical notes, and can be edited to your taste. Music can be compiled into a machine-code file and saved for later use in your own programs. The screen presentation is very sophisticated, with a full musical stave display, on-screen editing of tunes, full control over tempo and so on. But more advanced musicians should note that all the compositions are in the scale of C Major, and there is only one note length available. As a bonus **The Music Box** comes with several *Wham!* hits as demo files, and quite convincing they are too. As you will know from the May issue of *Sinclair User*, there's also a much more sophisticated version of the **The Music Box** for the 128K machine, which makes use of the 128's improved sound chip.



Beyond the Beep

Put a cheap MIDI synth and your Spectrum together and start to make music. Brian Cooper explains

Playing music on the Spectrum? Isn't that like trying to get a tune out of a house brick? Not really — although the notorious *Beep* may not strike you as the ideal musical instrument, your Spectrum can become the centrepiece of a powerful musical system if you know what to look out for.

It's all down to the advance of digital technology. In the past electronic musicians had to make do wth huge, expensive, monophonic (single-note) synthesisers like the Moog Modular Systems. Now advancing technology has put cheap, portable, powerful polyphonic synths from manufacturers like Casio and Yamaha within the price range of every computer user, and made available techniques like sound sampling and digital percussion which megastars like Paul Hardcastle, *Depeche Mode*, Howard Jones and *Blancmange* couldn't live without.

This guide won't tell you how to program your Spectrum 48 or 128 to play music.

But it will tell you just which products you can use, in conjunction with your Spectrum, to make music which just a few years ago could only have emerged from the most up-to-date 24-track recording studios.

The most important development has been MIDI — introduced in 1982, it's a Musical Instrument Digital Interface standard, similar to RS-232, which allows practically any computer to talk to any synthesiser, drum machine or sequencer. It means that even if you can't play a note on a keyboard, you can program your Spectrum to do all the work for you, while you concentrate on coming up with a good tune!

We'll look at the different kinds of music products on the market, in three categories; sound software, hardware add-ons such as samplers and keyboards, and MIDI hardware and software for controlling synths. Let's start with the *Beep* software.

● **The Music Typewriter** from **Romantic Robot** is also worth a look. Although it does assume a certain knowledge of music writing before you start, it comes with a keyboard overlay which helps you to pick things up quickly.

The **Music Typewriter** uses conventional musical notation in all its complexity, and can store 16 pieces of music of up to 254 bars length in total. Three bars can be displayed at a time, and the graphics are very clear and can be printed out to create your own sheet music.

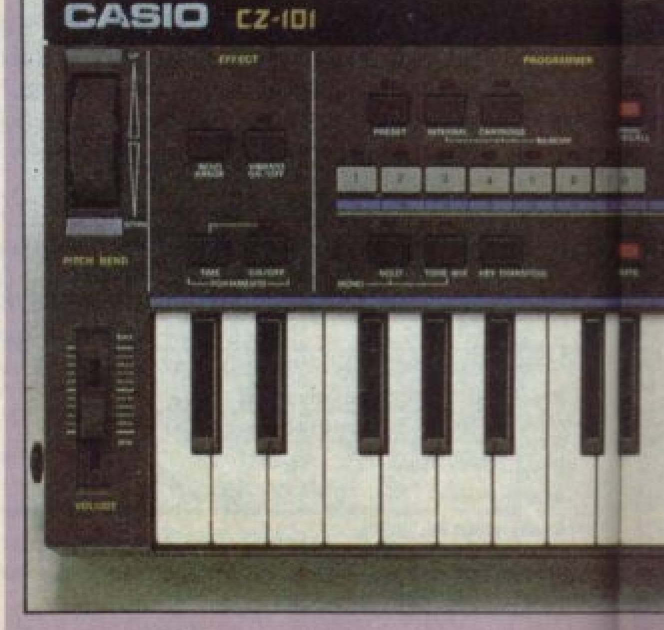
Pitch range is six octaves, tempo can be varied from 23 to 255, and you have full control over time signature and note value. Sharps, flats, naturals, transposing, an optional facility to transfer to microdrive and compile machine-code files — it's all here. Ideal for the serious music student (or teacher), though not best suited to amateurs who want quick results!

● A third contender for the Beat the Beep award is **Oliver's Music Box** from **Cosmic Pop** (if you can believe that). Again, it's a pretty sophisticated genuine music transcription program which accepts tied notes, triplets, transpositions, accidentals, tempo changes and so on. You can either have the music displayed a page at a time, or with the notes filling the empty staves as they are played. It's also possible to save the music as machine-code files which can be used in your own programs.

What is MIDI?

Introduced in 1982, MIDI is the ideal solution to the dilemma of electronic musicians — how do I connect my Supersonic 900 keyboard to my Musicsynth X57 in such a way that they can play each other?

It's a communications standard similar to RS-232, which allows compatible synths,



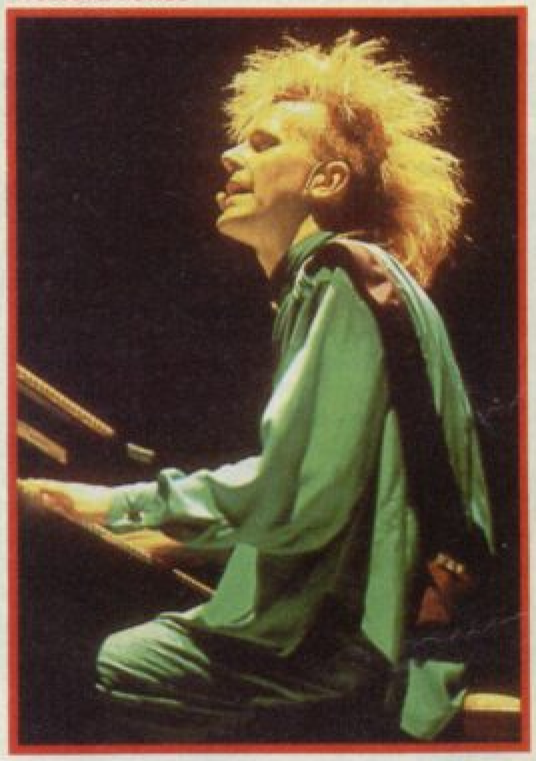
Paul Hardcastle



Blancmange



Howard Jones



Depeche Mode



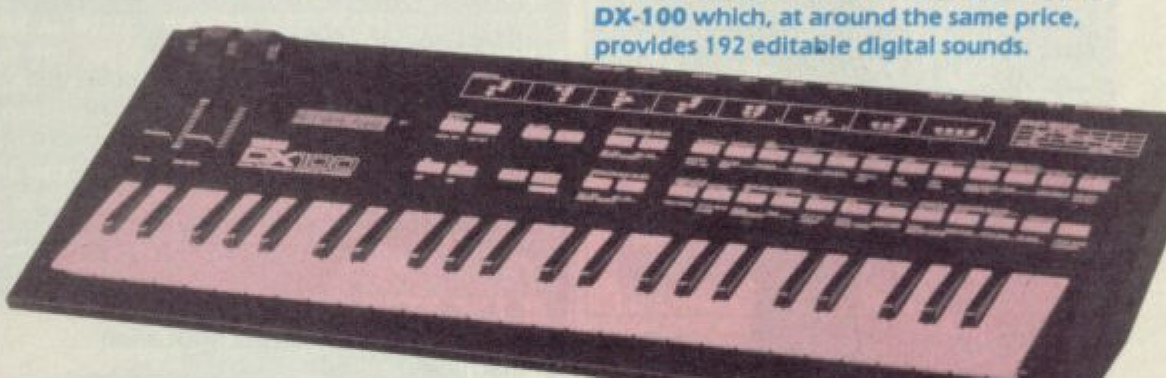
MUSIC

Synths

MIDI keyboards are becoming cheaper and cheaper, with the success of giants like Casio and Yamaha persuading more and more companies to go for the lucrative home music market.

At the cheaper end of the MIDI scale, there are some marvellous miniature instruments like the Casio CZ-101. This uses a digital sound generating system called phase distortion, in which sine waves are combined and manipulated to give powerful, realistic musical sounds. What's more, the CZ-101 can play up to four *different* sounds at once under MIDI control. It could provide a base-line, melody, harmony and percussion sound all at once, for instance. At about £300 the CZ-101 is a good choice for the new micro musician.

Yamaha's direct rival for the Casio is the DX-100 which, at around the same price, provides 192 editable digital sounds.



Yamaha's low-cost DX-100 synth

sequencers, drum machines, effects units and even guitars to exchange information about which notes to play, vibrato and glide, tempo, and sound settings.

For computer owners, the great thing about MIDI is that it allows the micro to control a whole music set-up, making even the least able musician sound like a whole band. The standard MIDI connector is a five-pin DIN socket. MIDI supports 16 'channels' of information simultaneously so no matter how many synths you buy, your Spectrum with a suitable interface will be able to play them all at once.

A typical MIDI set-up in a small home studio might consist of a Spectrum with MIDI music sequencing software; a MIDI drum machine controlling the tempo; a large MIDI synth, such as **Yamaha's DX7**; and a smaller keyboard like the **Yamaha DX-100** or **Casio CZ-101**, all under the control of the Spectrum. You can now program the Spectrum with all the accompaniment parts, and get on with the singing, guitaring or whatever, yourself, as the tape rolls.

But what instruments might you want to connect to your Spectrum?



The Casio RZ-1 is a digital sampling rhythm composer which will produce a wide range of natural and musical sounds.

Most major manufacturers also produce MIDI drum machines, many of which use digitally sampled sounds to produce startling realistic percussion effects. The cheapest is Casio's RZ-1 at £350.

It's also possible to get hold of effects units like the Alessis Midiverb which adds echos, reverb and harmonies to your music — all under the control of your Spectrum if you know how!



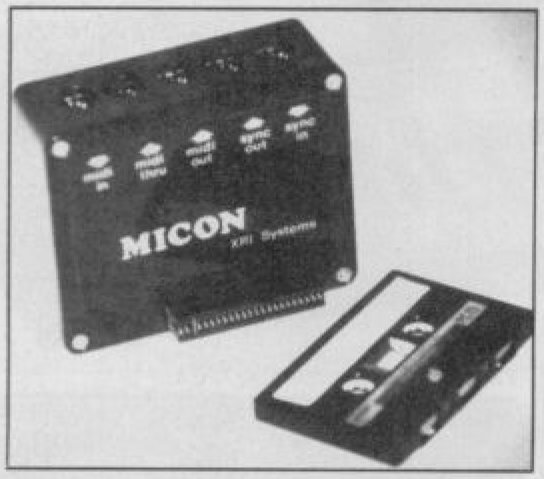
The CZ101 Mini Synthesiser from Casio could turn a budding pop musician into a superstar

MUSIC

MIDI hardware and software

Before you can connect up any of these synths to your Spectrum or Spectrum+ you will need to buy a MIDI interface. Although the Spectrum 128 does have a MIDI interface capability hidden in its RS-232 port, it's fairly useless since it only transmits information out, and will not accept incoming music information.

Better to spend money on a proper full-spec interface. Since MIDI is a standard, most interfaces have similar facilities.



● **The XRI Systems Micon MIDI** interface, at around £99, is a reasonably priced bit of hardware. It plugs into the user port and has one MIDI input and two outputs. Usefully, it also has a 'Sync' socket for the older **Roland**-type drum machines, allowing you to play your MIDI sequences in time with a rhythm. The software provided allows you to record eight lines of polyphonic music (up to 26,200 notes), assign them to any MIDI channel, edit them, display them in standard musical notation, then play them in synchronisation with a MIDI or **Roland** drum machine. Music is entered through the synth keyboard while the rest are inserted with the Spectrum's space bar, or in 'real time'. **XRI** plan plenty of other MIDI products for the Spectrum, including a **DX7** and **DX-100** voice editor and library, **Juno 106** Parameter display, and various MIDI-to-tape synchronisation products.

● **The Sell** interface is also marketed under the name **JMS**. It's a larger case featuring a connector on a ribbon cable. Again, it has one input and two outputs and is designed to work with a wide range of software from **Sell**. The **Live Sequencer** stores one track of real-time polyphonic muisic with touch sensitive dynamics, while the **8-Track Composer** stores 8,000 notes of real-time music information in eight tracks.

● **The Electro-Music Research** interface comes with up to five software packages. **The Performer** records eight polyphonic parts in real time. **The Composer** is a step-time sequencer. **The Notator** prints out music from the **Composer** program. The **Music Editor** allows you to edit **Performer** and **Composer** tracks. And the **Voice Editor** allows you to program sounds on a range of synthesisers.

● The cheapest interface yet is the **Cheetah** model, which costs only £49.95.

It's part of the series of units which includes the **SpecDrum** digital drum machine and the **Spectrum Sound Sampler**. The MIDI interface comes



The Cheetah Midi Interface ▲

complete with software which allows you to store several thousand notes, play sequences backwards or forwards, record in real- or step-time and use exotic 'MIDI delay' effects.

Cheetah also sells a **Telecom-MIDI Cable** for the 128's RS-232 port, at £9.75.

● **Midisoft's RAP** package is aimed particularly at owners of MIDI drum machines.

It uses a system of grids to allow you to compose 16 rhythm tracks of up to 1,000 measures chosen from 200 patterns. You can also use the package to control MIDI synths, so that 'log drum' preset on the **DX7** might come in handy after all.

MIDI software seems to be one area in which we will see more and more innovative products for the Spectrum. Although the lack of a fast, reliable, widespread information storage system limits the Spectrum's musical uses in some situations, it's likely that many machines will end up being used all the time in home music studios.

There are, however, plenty of hardware products around apart from MIDI interfaces.

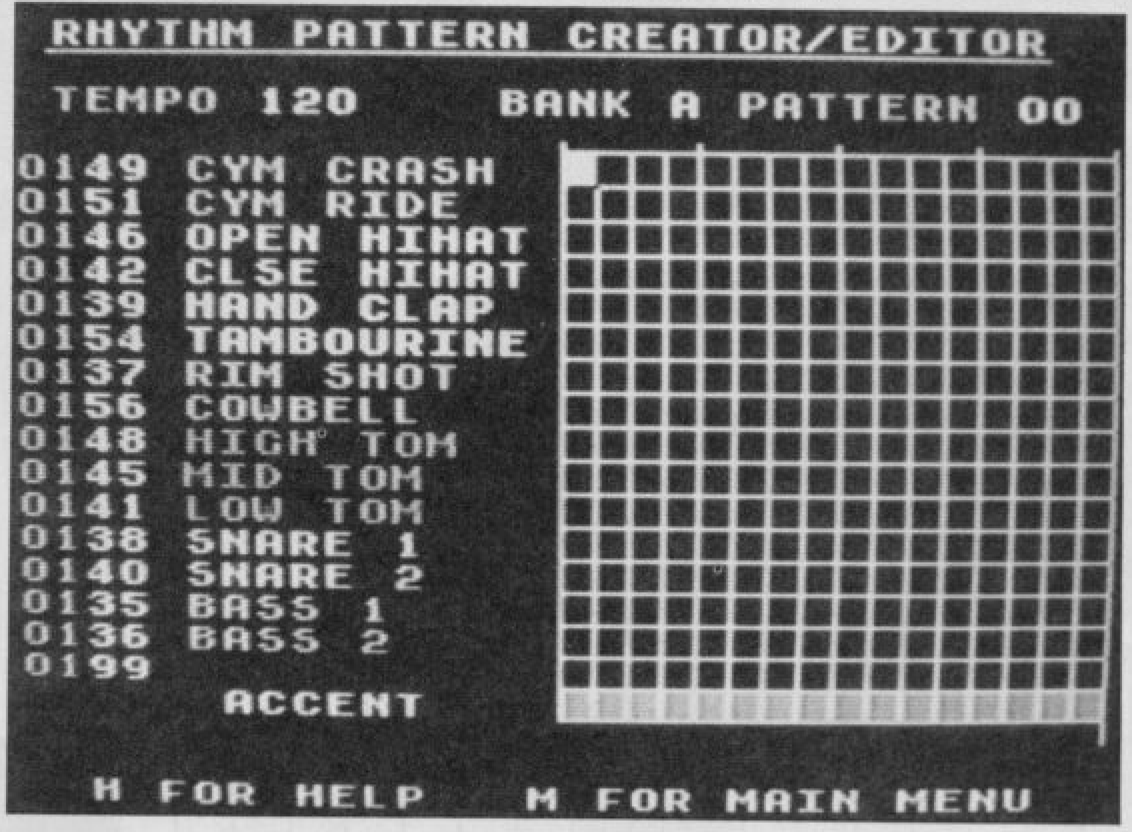
Add-ons

● The **Cheetah SpecDrum** is perhaps the most entertaining music add-on you can buy. It's a digital drum machine using real drum sounds stored in digital form to create amazingly convincing percussion patterns. Using an amplifier to get the best results, you can create drum patterns which are fully as good as anything you'll hear on *Top of the Pops!*

The hardware is a simple digital-to-analogue converter which plugs into the user port. The software, which is fully menu-driven, allows you to arrange notes on a stave, or tap them in, in 'real time', following a metronome beat. Sounds available include bass, snare, toms, clap, rimshot, cowbell and so on, and up to three sounds can play at once, so you can build up very sophisticated patterns. It's then possible to chain patterns into complete songs.



Midisoft's RAP ▼





The Teczon Dub Multi 4×4 personal recorder can be used at home or in a recording studio

CHEAPEST SYSTEM

All you need to start off with is your Spectrum, a really basic MIDI synth keyboard like Casio's CZ101 and a MIDI interface — the Cheetah one is the cheapest. Then you can compose and play your rhythm and accompaniment on the synth, send the data via the MIDI interface to the Spectrum and store it.

Then you can play the backing from Ram via the MIDI through the synth leaving yourself free to play a third melody line over the top. Such a basic system of just the synth and the MIDI interface could cost as little as £350.

You probably won't be happy with that for very long though. The thing you can't do is record your songs on tape. for that you need a low-cost mixer/recorder unit. Something like the Dub Multi 4×4 from Teczon is a good bet. It's a combined four-channel mixer and four-channel cassette recorder for around £3-400. And with that you can even do overdubs, either with quitar or drums/drum synth. With that set up you can imitate the megastars and certainly produce a passable demo tape.

Casio CZ-101 keyboard



Alternative sound sets are available on cassette. The **Latin Percussion** set includes a selection of woodblocks, bongos, maracas and so on, while the **Electro Kit** is full of marvellous zappy **Simmons**-type synthy sounds. There are more sound sets to come, and using the **Kit Editor** facility you can combine them into your own custom sets. It isn't possible to produce your own samples (yet!), nor does the **SpecDrum** feature MIDI, although you can synchronise it to a 'click-track' recorded on tape.

● **The Datal Digital Sound Sampler** is the one you want if those N-N-N-N-Nineteen effects intrigue you. It's possible to digitise sounds of up to four seconds in length using the microphone provided. You can then replay them at different pitches, or with a variety of whacky echo effects. It's also possible to make four shorter samples and play them back one at a time to form a sort of do-it-yourself sampled drum kit.

● Just released is the **Cheetah Sound Sampler**, which has very much the same sort of facilities. At £44.95 it provides a respectable 17.5 KHz sampling bandwidth and can record, reverse, edit, mix, graph, harmonize and replay samples at different pitches. Echo and reverb effects are also possible and the company is working on MIDI compatibility.

● The **DK'tronics Sound Synthesizer** add-on is the one for you if you want more sophisticated music from the Spectrum 128 itself.

Using the standard music chip found in the Spectrum 128K, the AY-3-8912, the **Music Designer** software included allows you to store and edit three tunes, each with three voices, of up to 256 notes each. You can also synthesise your own sounds by altering the pitch, envelope and waveshape of the sound chip. There are several other similar sound boxes on the market.

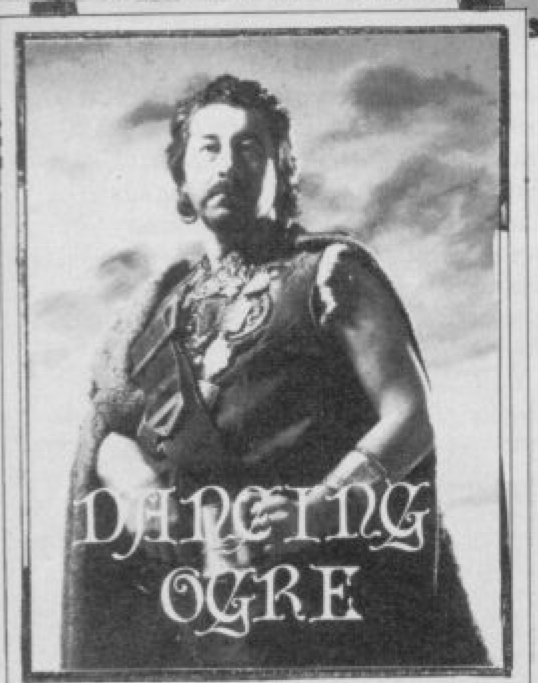
● Spectrum 128K owners will also be pleased to see that **HCCS** are to market a full-sized mechanical music keyboard for the machine. It's the **Echo 1**, which is already available in versions for BBC and Commodore computers. The keyboard has three octaves of full-size keys and comes with a version of the standard **OrganMaster** sound synthesis software. This allows you to select a number of preset sounds to play on the 128's sound chip, and also gives you some ability to create your own sounds. **HCCS** also manufacture the **Echosound Music Amplifier**, a 5 watt 6 inch speaker unit which will enchance the sound of your Spectrum 128.



Cheetah's sound sampler

Contacts

Casio, 01-450 9131.
Cheetah Marketing, 0222-777337.
Cosmic Pop, PO Box 475, London, E4 9UD.
Datal, Unit 8, Fenton Industrial Estate, Stoke on Trent, 0782-273815.
DKTronics, 0493-602926.
HCCS, 28 Hitchin Street, Biggleswade, Beds, 0767-318844.
Melbourne House, 60 High Street, Hampton Wick, Kingston-upon-Thames, Surrey, KT1 4DB, 01-943 3911.
Midisoft, PO Box 43, Romford, RM1 4EG, 01-732 1861.
Romantic Robot, 77 Dyne Road, London NW6 7DS, 01-625 9463.
Roland, 983 Great West Road, Brentford, Middlesex, TW8 9DN, 01-568 4578.
Sequential, Postbus 16, 3640 AA Mijdrecht, Netherlands, 010-31 2979 6211.
Sell, 01-387 7626.
XRI Systems, 10 Sunnybank Road, Wylde Green, Sutton Coldfield, West Midlands, B73 5RE, 021-382 6084.
Yamaha, Mount Avenue, Bletchley, Milton Keynes, MK1 1JE, 0908 71771.



Adventure Helpline

Gordo Greatbelly, landlord of the Dancing Ogre, offers help to lost adventurers

Unnoticed amongst the throng of travellers, we entered the lower city of Maru by the Gate of the Ten Temptresses. We took rooms at my old lodging place, The Mercenary's Monkey, and I soothed my pains and twisted muscles in a cooling bath of camel's milk infused with cloves and nutmeg.

Thus refreshed I took a stroll around the town to see how it had changed in the years I had been away. Maru is set on a vast crag of red sandstone and rears near a thousand feet above the desert floor. On the highest part is the upper citadel. Here is Janga's opulent palace, built of white and pink marble and surrounded by the equally rich houses of the nobility and priesthood. Fountains sparkle and there are shady gardens where the great folk while away their days in pleasure and quiet.

By contrast, the lowre city is a teeming, stinking warren where the rickety wooden tenements rise many storeys above the twisting and darkened alleyways. You can find every race of the Empire here, trading, haggling, begging and thieving. There are temples to every dubious god ever worshipped, along with slave markets, taverns and gaming hells from which an honest or simple man is unlikely to return.

And everywhere the air is suffused with the sweet stench of camel dung which the Maruvians dry and use for fuel.

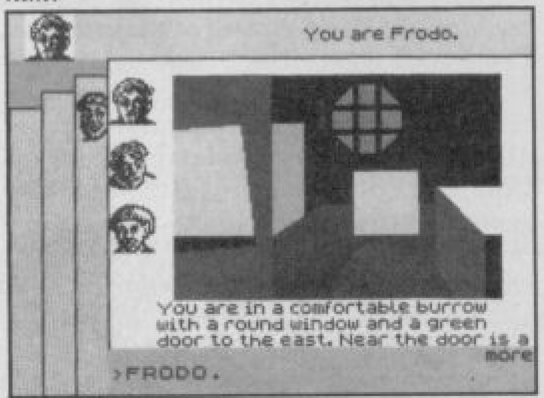
The noise is terrific. Shopkeepers yell their wares, camels bellow constantly, weird priests chant and clash cymbals and drums day and night. Sleep is difficult here and there is a good market for narga root, a narcotic that will knock out even the strongest man.

Returning to my rooms, grimier now than when I had arrived, I examine the huge pile of scrolls that awaited my arrival.

Many talked of **Lord of the Rings.** *Sean Renahan of Tonbridge cannot find Radagast the Brown, John Bolt of Angus cannot use the ferry and lazer, the Keen-Teen Adventurer of Paston cannot beat the Black Riders. In answer to these and many others, Teresa Franco of Seixal, Portugal offers a solution to the first part of the quest. Read what you need for there is much to note.*

"First I went, as Frodo, to Michel Delving where I found a candle stub and a note-book. Then to the lake where I headed west to a grassy plain. I went S/SW/S/E/NE/SW and arrived at the foothills of the blue mountains. Going west and south from there I met a monk who gave me useful information. I did as he told me and went to meet the green knight far to the west. I attacked the knight with my bare hands and after a time he went off, leaving behind a broken medallion. with this I went to the red lady and killed her without delay, ignoring her fine talk. Be sure to take the golden medallion she carries.

"The monk was now cooperative and let me go through the stone door. There I saw another door and after some knocking and waiting Radagast himself opened it and gave me a scroll with magic words upon it and also a pale jewel. I went back to Bag End to wait for Merry, who had left home and headed straight to the lake north of Bag End. He had swum in the lake. As he did so a strange character appeared and threw two elfstones at him.



Lord of the Rings

"Meeting together at Bag End again, the four hobbits packed and went to Maggot's arm. After a meal and some useful advice from old Maggot they crossed the river in the ferry. This is difficult as each hobbit must take turns at turning the handle, so the effort is shared.

"After going through the tunnel the hobbits went into the forest following the directions NE/E/S from the mossy place. Sam climbed a tree and found a pale green jewel. Heading SW/E/SE they came to a bare hilltop. From here to Tom's house the only problem was the willow which emprisoned all except Frodo, who went to Tom's and just asked for help. Back at the fissure, Frodo once again asked Tom for help and he freed the three hobbits. Frodo had to be careful and forced Tom to wait until all his friends were safe in the house. Pippin found he had two more elfstones after being emprisoned. With six jewels between them, Frodo decided to give three of them to Merry and one each to everyone else. This was wise as it's very important that Frodo, Sam and Pippin don't carry more than one jewel each when they leave Bree.

"A seventh jewel can be found under a plant inside a clay pot on the way to the Barrow-wight — throw it at him to leave the way east completely free. At Bree, Frodo and company can enter the gate if he uses the name Underhill. The hobbits visited The General Store and took the food lying around. In the Prancing Pony, Barliman will give Frodo a letter which tells the hobbits to follow Strider who awaits them there. A journey through marshes and hilltops followed and the hobbits came back to the gate of Bree. As they headed east again three Black Riders appeared. Frodo used magic, entering the words on the scroll as a single command — not as a 'say to' command — and saw the Riders off. He found his jewel and Sam's and Pippin's too had been destroyed. So Merry gave them his jewels and they followed Strider again. It was then that Strider suddenly stopped over the bridge. However the four of them continued eastward and met the Riders again on the east bank. Once again Frodo used his magic and disposed of the Riders.

"That's all, dear Gordo. If others want to be enlightened, tell them to write me at Av. Marcos Portugal, lote 31-1O. Esq., Paivas-Amora, 2840 Seixal, Portugal."

Tristan Elrond Belladonna of ACD Computer Services, 32 Harewood Avenue, Highbury Vale, Nottingham NG6 9EF, answers the Lady Sheila of Duxford's plea for advice on entering the barge in **Spoof**. *He says, "A simple verse provides the answer:*

Frustrated she, who by the boat,
Tries and fails to get afloat.
Although the answer seems quite harsh,
She must first talk to Lionel Marsh.
He is found inside the inn,
Beyond the bog, he drinks within.
And once the treasure there be found,
Traverse again the Barrow Down.
Examine then the hallowed thing,
Within the magic toadstool ring.
And then when all these deeds are done,
Lady Sheila can resume the fun.
Find again the lakeside park — The magic word will be 'Embark'."



Spellbound

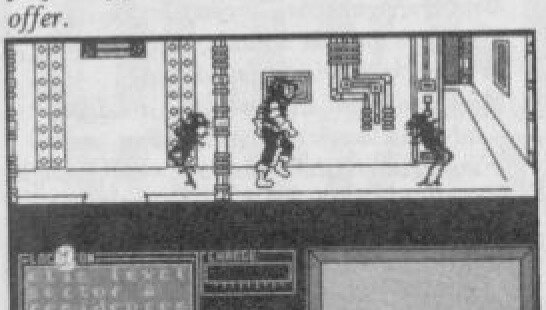
Belladonna is in fact, the wizard who created the quest and offers **Spoof, Robyn Hode, Paradox** *and* **Spectrealm** *to you all for only £9.95. In addition he offers advice for* **Spellbound** *adventurers stuck at the lift — "Take Miolnir from Elrand and the Elf-horn from Samsun. Enter the lift with both and summon Thor with the horn. Give him Miolnir and, using the wand of command, get him to help."*

From Malta, Noel Anastasi of Primrose, Valletta Road, Mosta, Malta writes in response to Cutter Taylor's need to trace the final two parchments in **Invincible Island.**

"Tell him to go down from the hill that lies south of the strong wall. He will need his



anorak and a necklace to get the parchments." In return Noel asks how to get past the hidden laser in Level 9's **Snowball**. As in many quests, the laser beam must be deflected by something shiny — in this case a silver tray. It can be found by unlocking the Butler robot from the recreation lounge — when freed the Butler will drop the tray. You should wave the tray at the T-junction to reflect the laser back on itself. Noel has also found a strange bug in the same firm's **Worm in Paradise**: "Go to the police station and type 'Give me'. You will enter a place where all the objects of the adventure can be found. Just type 'Examine all' to see them." Noel can offer help with **Bored of the Rings** from Delta 4, **Colossal Adventure**, **Return to Eden** (Level 9 again) and **Tir na Nog** and **Marsport**, both from Gargoyle. Write prepaid if you wish to take advantage of the offer.



Further offers of help come from Raygun Nurden of 57a Gaer Road, Newport, Gwent NP9 3GY. He can aid with **Mesage from Andromeda, Quest for the Holy Grail, Eureka!, Mindshadow, The Helm,** and **Subsunk.** He says he would be only too pleased to pass his time helping fellow adventurers who send him an SAE. In return he wants any advice you can give on **Runestone**.

Gregorius Russellus of Gillingham, Kent has sent me a vast sheaf of documents on **Swords and Sorcery** by PSS.

My thanks for his excellent maps and tips. Here are his suggestions on starting up and on Quadrant 1.

"When you train with the masters, I suggest the following: spend one day with Yama, six days with Bog and seven with Merlock. This should give you 22 magic points and, paradoxically, the defence attack. Make sure you eat all the pies you can before the start — you can buy five in all. Above all ensure you have selected Attack before you begin exploring.

"In Quadrant 1 your first step should be to go to Room 6 and get a sword — this will give you the Attack hack. Drop all the items you collect in Room 6 — it is best not to disarm the room trap there as you will be bombarded by five or six monsters if you do. Now go to Room 18 and disarm the trap. You can then get the magic staff from the sack. Hold it and it will increase your magic by 16 points and give you two extra spells — but will only work if your magic skill is greater than your fighting skill.

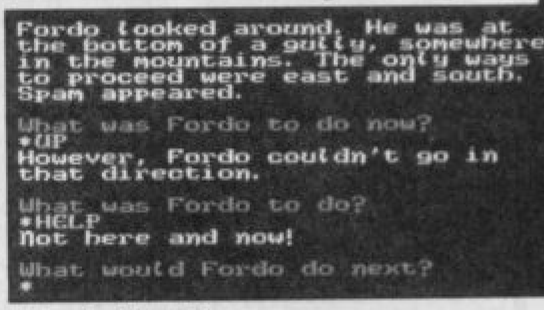
"When you're holding the staff, eat it! You can thus keep the magic and lose the staff — using the staff costs a lot of magic. Collect all the swords you can and take them to Room 6. There is a Ring of Jumping in Room 15 and Key 1 is in Room 14. You should also get the Sabaton from Room 22 f— if you are not holding a magic sword, make sure you select attack for a defence. The monster there is immune to firebolts and normal weapons. Finally, the way to Quadrant is through Room 4."

For those of you who do not understand Greg's room numbering, he has numbered the rooms from left to right, beginning at the top left of the map-screen.

Maria Wagland of Tywyn berates me for my advice on **The Sorcerer of Claymorgue Castle.** She is miffed she cannot discover the Unravel spell in the plain room that lowers the chandelier safely. To find Unravel and a Methuselah spell enter the plain room and 'Pull West'. Maria also wishes to know how to dry the towel properly, as she can only wring it out to dampness. Go to the cavern cross the stream and drop the damp towel — it will become dry. Miffed no more, I hope.

Sanjay Sen of Chesterfield seeks aid in getting to **Terrormolinos** and asks where to find the passport and some camera film. The passport is hidden in the sofa in the living room but Sanjay will have to wait until he arrives in Spain to buy his film. Also, bemoans Sanjay, once he has collected all the items he can find, he discovers the taxi has driven off. To catch the taxi successfully you must refine your search through the house, doing only what is absolutely necessary — the sequence is time limited. And remember to call Doreen before you go — you cannot get abroad without her and she is forgetful once she is in the bathroom!

Can none of you get through the maze in Delta 4's **Bored of the Rings**? Amongst my



Bored of the Rings

pile of letters are nigh on thirty from amazed **Bored** adventurers, including Carter of Bradmore and Lawrence Moon of Crawley. Give the coins you get from the machine with the battery to the crazed pixie. With the map enter the maze and go E/N/E/E/S/W/S/E to an alcove to get a poster. Now West twice and South once. You are now free of the maze. Enough.

Finally Limbo Dove of Kirkby-in-Ashfield is haunted by the task of crossing the barrier in **Inferno**. He nêeds a rôpe and a friend's help to get across. Then he has a chance in Hell!

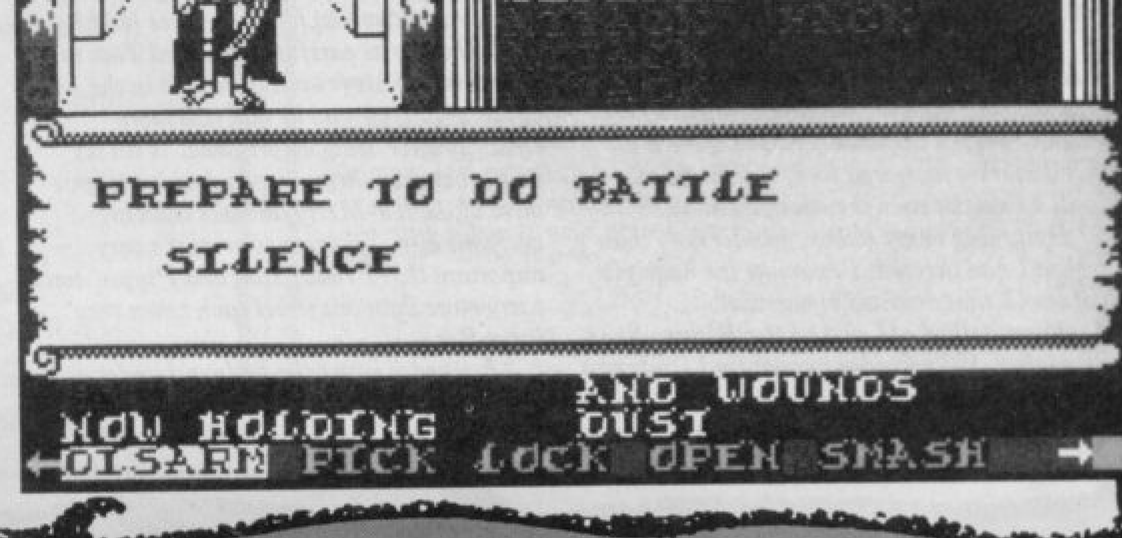
Farewell, my friends, until next moon.

Greatbelly

Gordo Greatbelly, Landlord

If your have a tale to tell, or are in need of a helping hand, write to the Landlord of the Dancing Ogre c/o Sinclair User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

Swords and Sorcery



Heavy on the Magick



CONVERSATIONS WITH APEX



THE DOUBT OF RABAK



SCREEN SHOTS FROM THE SPECTRUM VERSION



OLD TROLL!



BEFORE THE GATES OF WOLFDORP



BEWARE OF THE WEREWOLF!



MAGOT THE PRINCE

From GARGOYLE ~the GAMEMASTERS

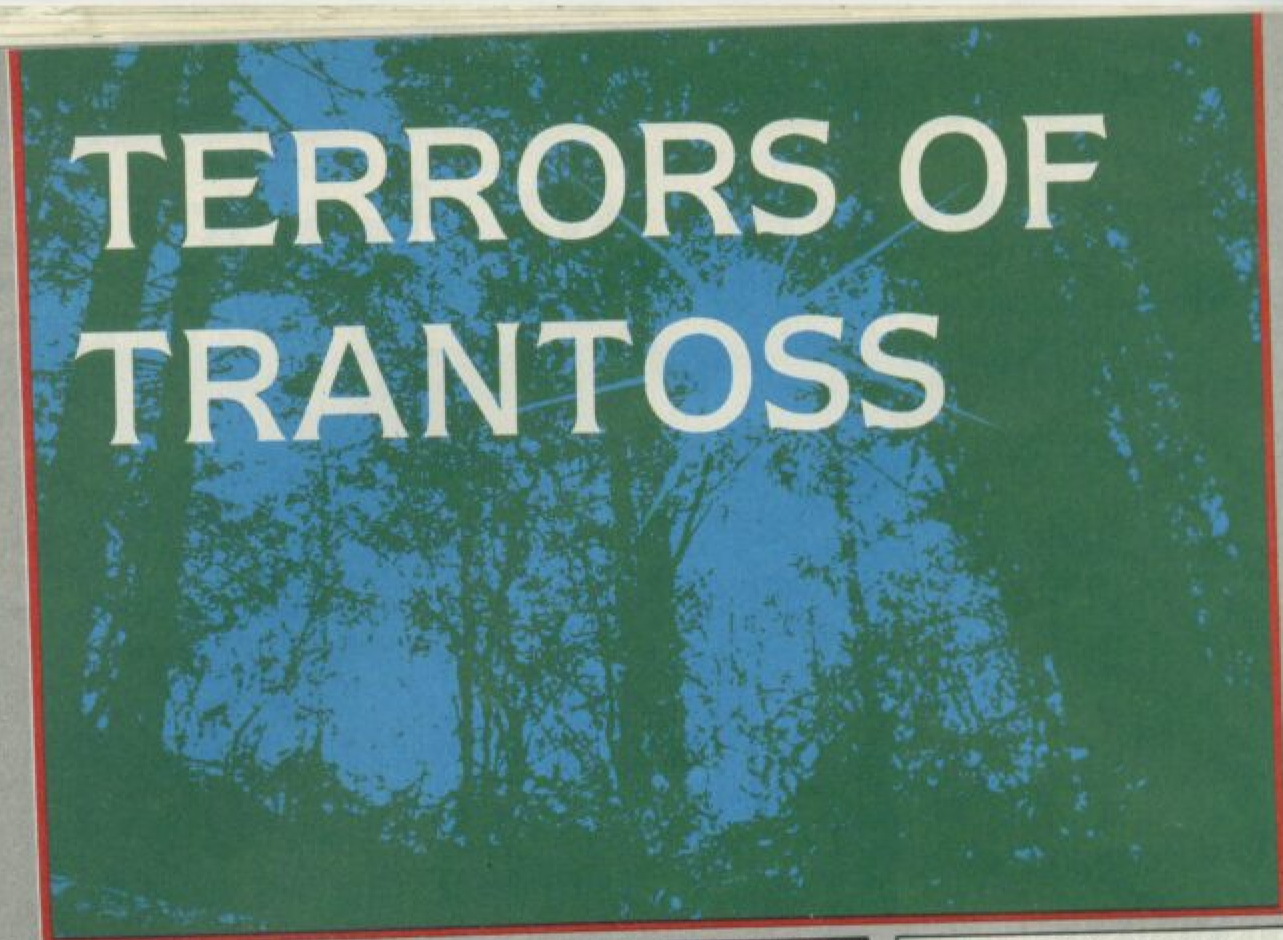
SPECTRUM 48/128K
(AVAILABLE NOW)
AMSTRAD
(AVAILABLE MAY 1986)
CBM 64/128
(AVAILABLE SOON)

£9·95

GARGOYLE GAMES LTD., 74 KING STREET, DUDLEY, WEST MIDLANDS DY2 8QB
Telephone: (Sales) 0384 238777 (General) 0384 237222

ADVENTURE

REVIEW



TERRORS OF TRANTOSS

Those of you who managed to survive the assassin's bullets in Ram Jam's previous effort, the excellent **Valkyrie 17** should be pleased with their latest, **Terrors of Trantoss.**

The game, marketed by Ariolasoft, has been written with Ram Jam's own adventure generator, the BIRO Mk2, and has a 'traditional' setting — the world of heroic fantasy and magic.

The story goes thus . . . Trantoss, archmage and evildoer, was defeated long ago and his magic mace fractured and hidden. As is usual with these crafty warlocks, Trantoss has somehow managed to resurrect himself and the Mountains of Mortran rumble again with his power. Whilst all good folk quail in terror, two brothers decide to rid the world of Trantoss once and for all and meet in the village of Hapsal to begin their quest.

Lobo is a hefty sort of bloke, well able to swing a good punch or cart around a sack of sea-coal. Scarn is slim and tall — he may not be as strong as his brother but he can wriggle his way into places where Lobo would just get stuck. Put together, they make a good adventuring team.

They'll either operate as a unit and travel together, saving you the need to give separate movement instructions to each or you can send each brother to different locations to achieve different aims. If they are apart you can swap between them following their action at different places. Colour coding on the small pictures of our heroes shows who you're currently controlling.

The loction graphics are fairly classy and, unusually, take up the left-hand side of the screen. They draw so rapidly that they don't interfere with the game in any way and they're also interactive — that is, they'll often show the results of your actions. If you open a cupboard you'll get a new picture showing the open door; if you bridge a stream the planks you use will be shown. There's a picture for every location but, despite that, there are over 130 locations and a very complex set of problems.

The quest gets off at a leisurely pace with the collection of useful items for the journey — as usual in these situations you'll have to agonise over what your're going to leave behind.

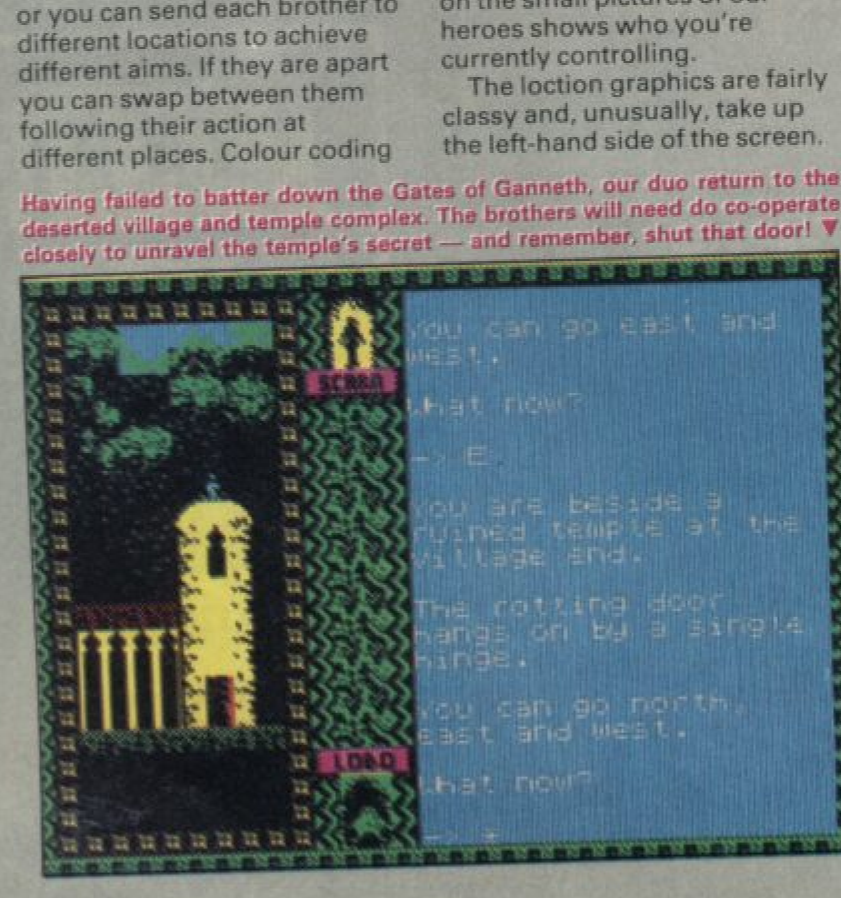
The brothers buy the services of a guide to take them through the trackless paths of the Forest of Grondin. Magic rears its enigmatic head almost immediately with the discovery of a Wizard's Staff. Inscribed on it are strange runes. Symbols of the same type are found in a number of places and you're going to have to puzzle out their meaning quite quickly if you want to progress very far.

All amateur cryptologists will probably put in a lot of effort at breaking the code — let me



▲ Smug after solving the runic problem, they've now passed the Gates and the guardian Fanglizard. The ferryman waits to take them over to the mountains. Lobo searches his pockets desperately for the cash he hasn't got — he's already died once trying to cross the rickety bridge further up river. Public spending cuts can be a pain.

Having failed to batter down the Gates of Ganneth, our duo return to the deserted village and temple complex. The brothers will need do co-operate closely to unravel the temple's secret — and remember, shut that door! ▼



FACTS BOX

A top class adventure. Complex puzzles, an atmospheric plot and professional presentation make it a winner.

TERRORS OF TRANTOSS

Label: Ariolasoft

Authors: Ram Jam

Price: £7.95

Memory: 48K

Reviewer: Richard Price

★★★★★



warn you that the solution is a simpler than you think!

Provided you solve the mystery of the runes you can explore a wide region of countryside. Once past the ferryman you head up into the mountains where there are caverns, vaults and more magical objects. Several tough mazes to negotiate and other characters, like robbers and mountain men, to help or hinder you. You aren't forced along one route and can easily wander around in quite a



broad landscape.

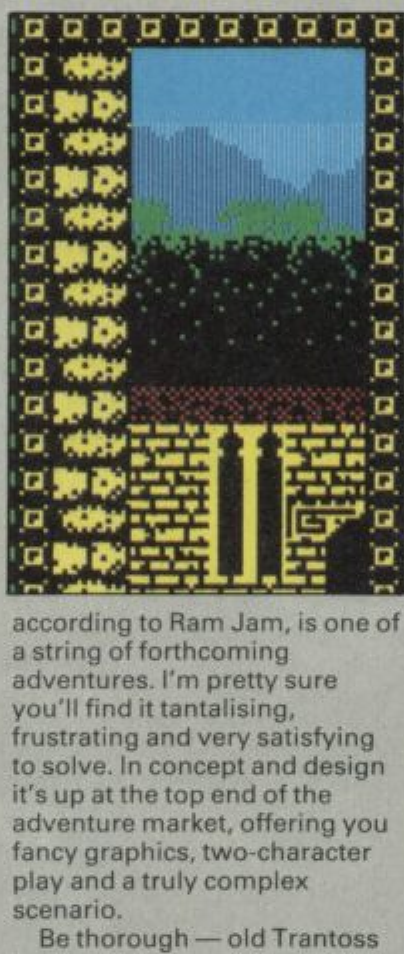
In fact, for many of the problems you'll need to perform complicated tasks involving numbers of objects and considerable exploration to discover those you require. For instance, at one point, the mountain mens' blacksmith needs some steel — you know that you might get a bow in payment if you can bring him some. Off you go, back towards a demon-filled dungeon where you notice some bars under lock and key. To get there you'll have to cross a crystal bridge but to do that you'll need a vine — you've probably already lost your rope. Have you got a suitable chopper to get the vine? Do you know how dangerous the bridge is?

This is one of the simpler of a mass of tangled tasks.

The net result is an adventure of pretty fair difficulty that will keep even the experts busy.

I found very little to feel negative about except for the occasional delayed response from the interpreter. In general it's verb/noun input but at times you'll need to say a little more — like stating which type of key you want to use for a door or where you want to put a particular object. This is no problem as far as I'm concerned, as I far prefer simplicity to the complications of some of the poorer full sentence parsers. The descriptions are crisp but, given the smartness of the graphics and the plethora of things to do, this doesn't seem a great loss. Even so, when you do get an amplified description you'll find it's literate and atmospheric. "The hunchback grunts noisily, in stark contrast to the ominous silence, as he ferries you across the river. You are on the north side of the river where you see the remains of an old bridge by a sand strip."

Terrors of Transtoss is a fine successor to **Valkyrie** and,



according to Ram Jam, is one of a string of forthcoming adventures. I'm pretty sure you'll find it tantalising, frustrating and very satisfying to solve. In concept and design it's up at the top end of the adventure market, offering you fancy graphics, two-character play and a truly complex scenario.

Be thorough — old Trantoss is no walkover and his magic mace hard to destroy.

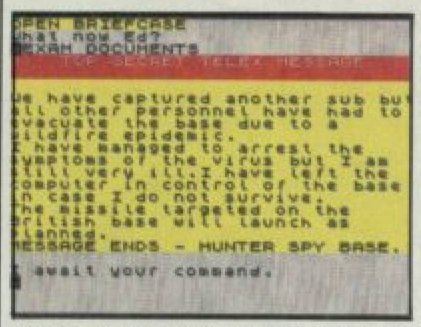
And when you've done that, you're still going to have to go through a great deal of the game again in order to collect the treasure and complete it.



◄ **The gateway to the Caverns of Trantoss — no, the villain isn't here and you'll need to be inventive to lift the gate and keep it raised. We're nowhere near the end of the game and still feeling our way forward into the threatening landscape.**



ADVENTURE REVIEW



▲ **The document found on the dead scientist**

SEABASE DELTA

Firebird's adventures in its Silver range started off well with **The Helm** and **Subsunk** — both **Quilled** and both nice and cheap at £1.99.

The latter, if the contents of the Gordo Helpline is anything to go by, has been quite a success. I certainly thought it was fairly complex.

No doubt heartened by all this consumer approval, Firebird has now issued the follow-up to **Subsunk** in the shape of **Seabase Delta.** Like its predecessor it's written on the **Quill** and continues the story where **Subsunk** left off.

Ace cub reporter Ed Lines — I groaned last time so I'll groan again — managed to send off the 'Mayday' message from the stranded nuclear sub *Sea-Lion*. Regrettably, instead of winging its electronic way to Admiralty Arch, the message has been intercepted by the unspecified enemy. Their agents have now used some weired and wonderful tractor beam to pull the long-suffering *Sea-Lion* into their Delta base.

Sighing at his bad luck and no doubt aware that his editor will never give him the overtime he's earned, our Ed climbs out of the sub's main hatch into the tubular walkway of Seabase Delta.

There is an eerie silence and at the end of the walkway a dead enemy agent and a briefcase. A search of the case quickly reveals that a strange and virulent virus has destroyed the personnel in the base. Villainous to the end the enemy have targeted one of their missiles on a suitable British base and left the computer in control of the base.

Ed's task is to get the computer off-line and de-activate whatever mechanisms control the missile.

The game is very open — most of the base is accessible right from the beginning, apart from the places where the games' deepest secrets are hidden. There are vast numbers of objects to puzzle over and many cryptic clues. The object collection is very varied, ranging from the mundane

FACTS BOX

Leaves you with the feeling of having got value for money. Ranks well up in the cheapo games section

SEABASE DELTA
Label: Firebird
Price: £1.99
Memory: 48K

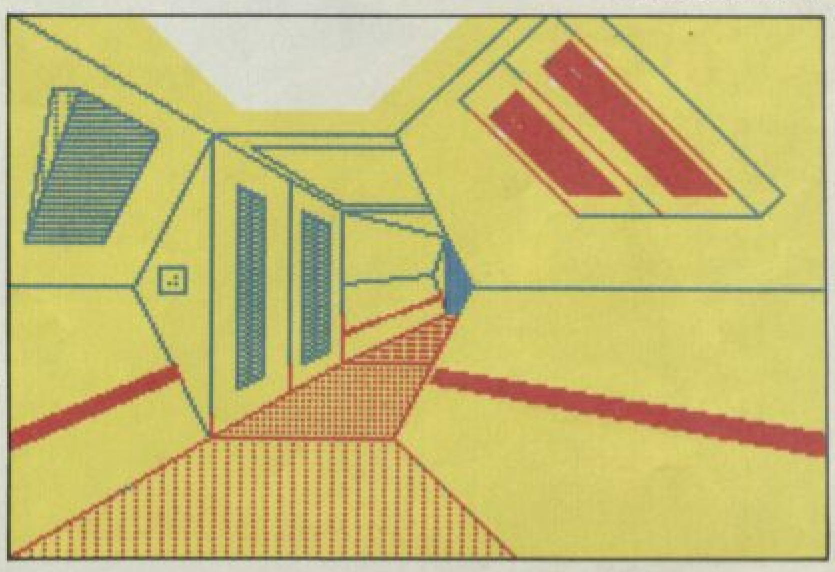
Reviewer: Richard Price

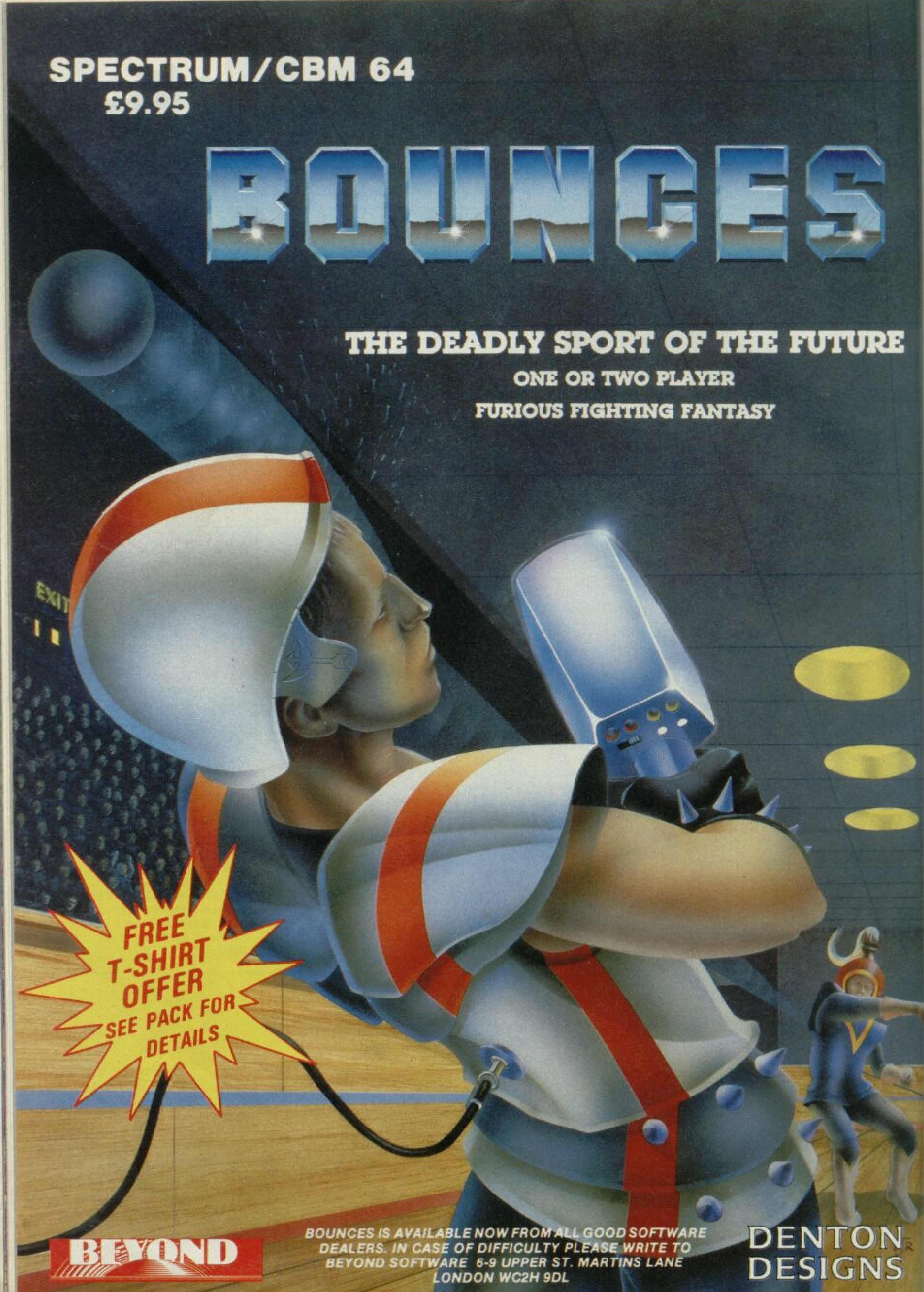
★★★★★

day-to-day necessities like flour and video-game machines to the components of a diving suit. Just as in **Sunsunk** many of these will need to be combines or used in specific ways to resolve particular tasks.

The base itself has a fairly

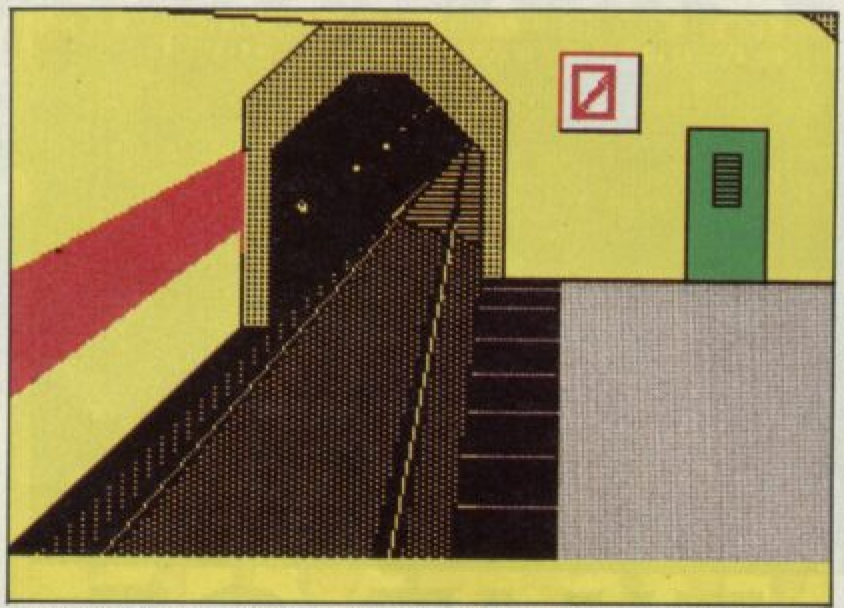
A base corridor ▼




SPECTRUM/CBM 64
£9.95
BOUNCES
THE DEADLY SPORT OF THE FUTURE
ONE OR TWO PLAYER
FURIOUS FIGHTING FANTASY
FREE T-SHIRT OFFER SEE PACK FOR DETAILS
BEYOND
BOUNCES IS AVAILABLE NOW FROM ALL GOOD SOFTWARE DEALERS. IN CASE OF DIFFICULTY PLEASE WRITE TO BEYOND SOFTWARE 6-9 UPPER ST. MARTINS LANE LONDON WC2H 9DL
DENTON DESIGNS

complicated internal geography, consisting mainly of a series of circular towers connected by a motorised tubeway. Each tower has its function — crew quarters, computer centre and weapons control area — and there are a number of floors to each unit, connected by regularly malfunctioning lifts. There are also conveyor belts that rarely travel in the direction you want unless you do risky repair jobs, as well as an occasional chute to slide down.

There's loads of business to do and plenty of things to fool around with. You will need a plastic card to authorise your travel on the tubes, you can try and make pancakes in the mess or find a token to play the video machine. Alternatively you can drown yourself in the airlock by accident — this place is underwater, remember?



▲ The tubeway platform, familiar to all who've waited in vain on the Northern Line

Surprisingly, the graphics are full-screen and do take a while to draw. It's hard to see why the authors didn't use the **The Patch** to make faster half-screen pictures. However, there aren't too many anyway so the intrusion is kept to a minimum. The text itself is at a fairly basic level but the structure of the base, the travel system and the many messages and objects provide an atmosphere in their own right.

The jokey approach also helps to keep your spirits up and you will find yourself quickly caught up in the game.



RETURN TO ITHACA

Sailors' tales always grow in the telling. Tall stories of sea-beasts, strange lands, magic and monsters have probably been around since someone first got the idea to hollow out a tree trunk and float away down river.

The ancient Greeks, being sharp traders and daring seamen, were particularly partial to such nautical fantasies — twenty-five centuries or so ago you could have wandered into a dockside bar in the Greek port at Maresilles and listened to the story of the crazy explorer who claimed to have sailed so far north that he's discovered an island called Britain and, further north still, a place where the sea froze. This bit would always get them rolling around helplessly with laughter and calling for more retsina.

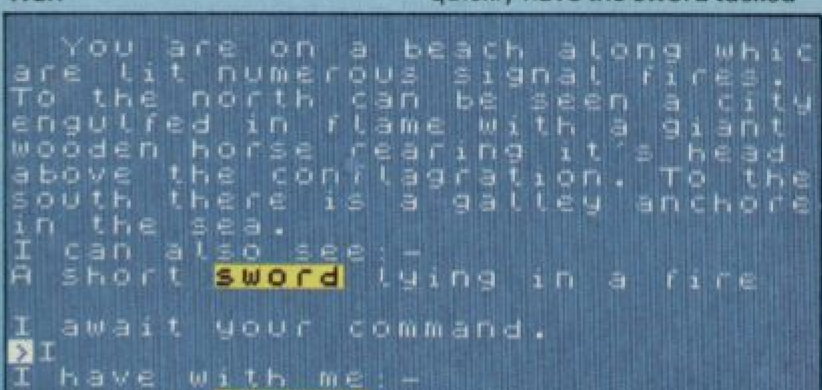
Nobody believed such stuff, of course, probably because they'd all taken in the tallest story of all — the Odyssey, a mixture of bizarre traveller's tales held together by the central theme of Odyeesus' return home from the Trojan War.

This Odysseus, a crafty and fairly vicious priate who called himself King of the Isle of Ithaca, had got up the gods' noses somewhat by devising the idea of the Trojan Horse and bringing about the ruin of their precious city of Troy.

So when he loaded up his war-galley with loot he may fondly have believed that he'd be back home with his wife Penelope in a few weeks or so. The gods had other plans and saw to it that he spent the next ten years going from danger to danger.

Return to Ithaca from Atlantis software lets you retrace Odysseus' journey and relive his exploits amongst the drug-crazed Lotus Eaters, cannibalistic Laestrygonians and the renowned Cyclops.

The game is **Quilled** text with some loction graphics, mainly to depict new landfalls. Not surprisingly you begin on the sea-shore beside the burning towers of Troy. There you get your sword and board your galley. Check your inventory carefully and you'll pretty quickly have the sword tucked in your belt. Sailing is another matter — the description of the ship doesn't include all the details.



Set sail and you'll be carried to the land of the Lotus Easters, a strange tribe who thrive on hallucinogenic fruits. There, within the maze which can be tricky if not mapped, can be found a barrel of wine. You're going to need that wine at your next stop — the island of Polyphemus — where you'll find the Cyclops, a voracious giant who's quite happy with a snack of sailor pie.

Quite possibly you'll go back to the ship with your wine clutched in your hot little hand only to find yourself stranded forever amongst the laid-back Lotus Easters. There's your trusty ship, a speck on the horizon. Forgot to drop anchor didn't you? There are a number of tricks like this dotted around the game and you'll quickly learn to be careful and apply logic to the proceedings.

If you know the Odyssey legend you'll remember that Polyphemus was disposed of in quite a complicated way. The program uses a different and more simple method to get out of his clutches so don't assume that because you've read the book you can walk through the game.

In general though it does stick to the original storyline, ideally suited to a text-only style. At times I felt more could have been made of the sea-travel — once you've upped anchor you are simply transported to the next destination and don't need to navigate your way around the ancient Mediterranean. This seemed a shame as it would have been more entertaining to find correct routes, even if it meant visiting places at the 'wrong' time in the story. Certainly it would have given a more open feel to the play.

Descriptions aren't too bad. They can get quite lengthy and often contain concealed information. More could have been made of the strange scenes, however, and the horror of Polyphemus' cave was not played up to its full extent.

FACTS BOX

Fairly basic Quilled adventure. It won't take you ten years to finish but you'll get your money's worth

RETURN TO ITHACA
Label: Atlantis
Price: £1.99
Memory: 48K

Reviewer: Richard Price

★★★★☆

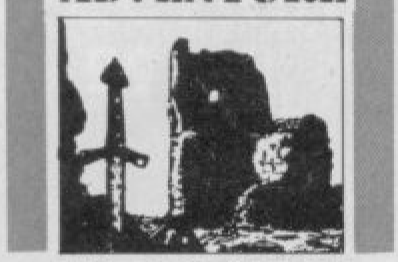
The graphics are full-screen **Illustrator** type. They are pleasant enough and use repeated routines for quite a few of the locations, placing the same ship in varied landscapes.

Not enough has been done to alter the basic **Quill** messages and **Examine** too often gets the *I can't* response — again slightly more detail would have enhanced the feel.

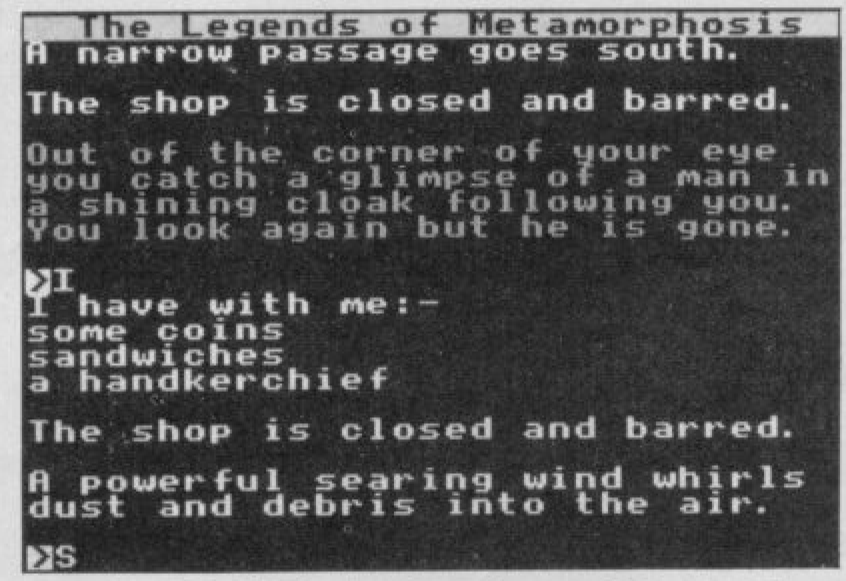
Despite these criticisms, I enjoyed playing **Return to Ithaca**. It's not a mind-bender but the story is familiar and the approach intelligent.

What's more it's cheap, so the combination could be irresistible to those on a tight budget.

ADVENTURE



REVIEW



TIME OF THE END

It is the near future, not long after the troubles of '88 that scarred and shattered the cities.

Even the earth itself seems to be shaking itself to pieces — earthquakes, meteors, tidal waves and intense heat are battering the planet, whilst its inhabitants war amongst themselves, like quarrelling children in the ruins of their world.

Just another Monday morning, you may think, as you scan the scenario for **Time of the End** — a program from a one-man software company, Mandarin Software. Who is behind it all, what sinister forces are at work to destroy mankind? Is the Earth merely the plaything of demented alien powers who while away their boredom by tormenting the earth like a fly on a pin?

You betcha! And you are drawn by accident into the conspiracy. From unassuming city gent, still manfully going to work despite the fact the Bakerloo Line has packed up, you can become saviour of the world. To do this you'll have to go through Kafkaesque transformations and suffer numerous indignities and slights from the mad aliens. "Huh' shrugs one as they prepare to torture you, "This one's a pathetic weakling even by their standards. Let's kill it."

The game begins in riot-torn London in the late eighties. On your way to Waterloo along the Embankment you suddenly come across a glowing orb. They've got you now and, with a wrenching of atoms, you're transported to the alien base, deep in space. Once inside the glittering labs it's best to get quickly away from the creatures who seem to think you could benefit from a Charles Atlas course. Out of the frying pan into . . . the maze. When you've sorted it out you'll probably be feeling good like I was until the robot gets you and sends you back to Earth in the shape of a jackdaw. Devious, these aliens.

At this point you can ask for help — the droll response sums up the dry humour of the game: "You are a bird and limited in what you can do."

> **FACTS BOX**
>
> *One of an increasing number of independently produced Quilled programs. And it's a goody*
>
> TIME OF THE END
> Label: Mandarin
> Author: Keith Milner
> Price: £3.95
> Memory: 48K
>
> Reviewer:
>
> ★★★★☆

Time of the End is well-written and by no means simplistic. There is a nice attention to detail and descriptions are full and evocative.

A list of verbs is provided to avoid the old problem of finding the right action by going through your Thesaurus. The nouns you'll have to work out for yourself. There are numerous dead ends to get stuck in if you forget to think — at one point I found myself transported to the alien base but my body had disappeared, allowing me to do nothing except think. "OK" says the message, "You think so you exist but what are you thinking about?" It took me quite a while to get back my pathetically weak form.

The program is **Quilled** and text-only. Leith Milner, the boffin behind the game, firmly believes that graphics are only really useful for eating up memory that could better be used for more text. He's also included a solid type-face which is much better to look at than the normal Sinclair font.

Input is firm and beeped and there are a few sound effects to accompany transformations. This is a game that easily matches up to many commercially marketed adventures. The sci-fi setting is convincing, with a fair amount of action and a variety of different environments to get tied up in.

As it turns out, even Kilroy himself is an alien, this time a good one who's been trying to warn the Earth for years. Odd things like this give the game an individual, quirky feel and help to hook you in. It comes medium-priced with the promise of a sequel in July. If you fancy the sound of it send your cheques to Mandarin Adventures, 14 Langton Close, Woking GU21 3QJ.

SNOW QUEEN

Snow Queen, based on Hans Christian Andersen's original story, has actually been ready for release for a while now but the gels over in the deepest Ireland have been seeking out a distributor for their game.

Now Mosaic, who brought out **Erik the Viking** and **Adrian Mole** are issuing the classic and much-loved fairy tale, telling how young Gerda runs away from her cosy home in search of her friend Kay — who has been carried off by the evil but ultra-beautiful Snow Queen. Gerda journeys through numerous adventures to the icy wastes of the North Pole and the Snow Queen's palace.

The game-play follows the original tale quite closely, adding extra problems to suit the computer format. You will need to read the book carefully either before or during play but you won't always get your answer from the text.

The game comes in two parts and is written using **The Quill**.

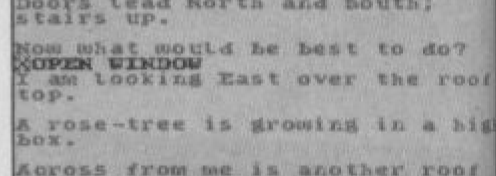
> **FACTS BOX**
>
> *Fairytale style adventure with story book illustrations. Gentle and quite cleverly done*
>
> SNOW QUEEN
> Label: Mosaic
> Author: St Brides
> Price: £9.95
> Memory: 48K
>
> Reviewer:
>
> ★★★★☆

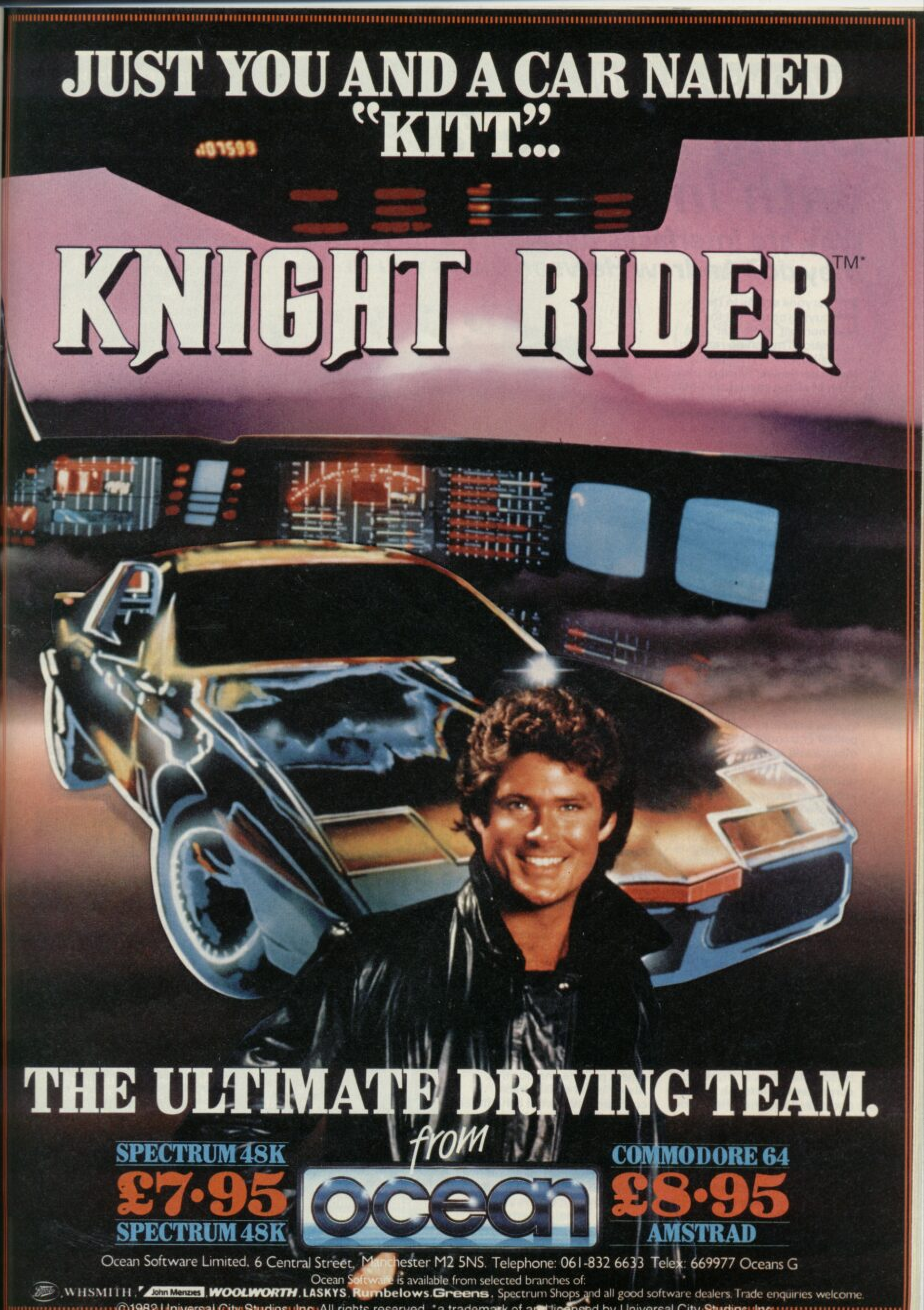
There are **Illustrated** graphics which reflect the origins of the story by looking very much like the kind of pictures you'd get in one of those central European fairy-story books.

The descriptions and general approach are intelligent and literate. Gerda has her own personality and, being a wee thing, will sometimes not do quite as she's told unless she's put under a bit of pressure — you'll need to force her into reading the books that will help her to escape from the witch's enchanted garden.

Whilst it's fair to see the adventure as very much family entertainment, don't let that fool you into thinking that the play is a doddle. There are some tricky problems inside the innocuous format, as you'll soon find when you try to escape the garden or, later on, try to navigate your way around the Snow Queen's palace. Movement directions there behave very strangely until you remember that you're actually supposed to be at the Pole, where East and West are not quite what they seem.

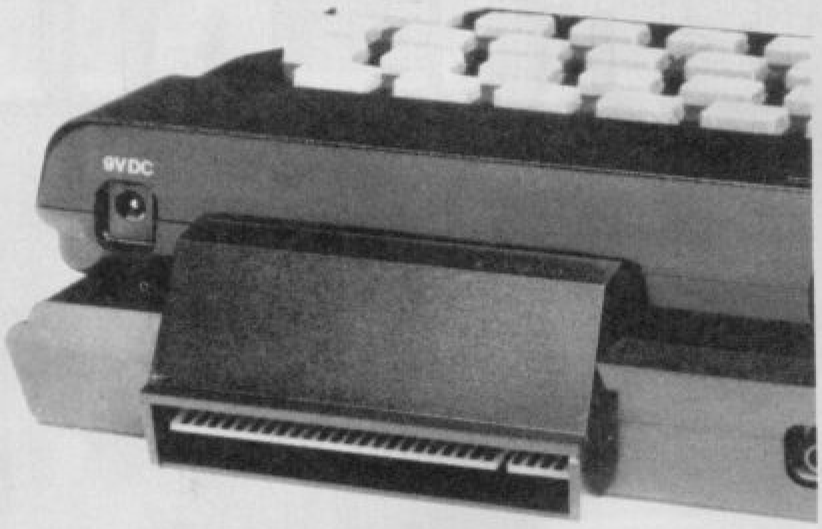
When I previewed this, I said I thought it would make for ideal Christmas entertainment for all the family, even those who might not be too keen on computer gaming. I'll stick to that view, which, to me, makes it all the stranger that the game has been released in time for Midsummer's day!




JUST YOU AND A CAR NAMED "KITT"...
KNIGHT RIDER™*
THE ULTIMATE DRIVING TEAM.
from
SPECTRUM 48K
£7·95
SPECTRUM 48K
ocean
COMMODORE 64
£8·95
AMSTRAD
Ocean Software Limited. 6 Central Street, Manchester M2 5NS. Telephone: 061-832 6633 Telex: 669977 Oceans G
Ocean Software is available from selected branches of:
WHSMITH, John Menzies, WOOLWORTH, LASKYS, Rumbelows, Greens, Spectrum Shops and all good software dealers. Trade enquiries welcome.

Being face to face with interfaces

Why are interfaces necessary and what do they do? Andrew Hewson plugs you in



Everyone seems to be buying printers at the moment. Well, that's the impression I'm getting reading the mail. Why, or at least why now in particular? Perhaps it's a result of all the special summer offers in the shops giving away cut-price goodness-knows-what with every Spectrum bought.

Whatever the reason I recieved this letter from Matthew Scrimshaw of Runcorn. **I can't understand all this mumbo-jumbo surrounding printers and printer interfaces. What is an interface? Why is one needed? how come the old ZX Printer didn't need one?**

I know what you mean Matthew. Perplexing isn't it?

First of all: What is an interface? Well, think of it this way. Person A decides to design a computer and builds it around a Z80 microprocessor, chooses the speed at which it is going to operate in the design and the voltage it will run on. Person B decides to design a printer and chooses electric motors and sprocket sizes, fixes the voltage it will run on and the number of characters it will accept per second. Now suppose you buy a computer from Person A and a printer from Person B and try to join them together. You'll pretty soon discover that the computer sends characters too quickly for the printer, that the plug and sockets don't match and to cap it all the printer runs on twelve volts whilst the computer runs on five so that if they are connected together there is a danger that one or other unit will burn out.

Now suppose you're a dab hand with a soldering iron and decide that you can't be the only one stuck with two incompatible units. So you build a black box to allow the computer to talk to the printer and after six months hard work you've got a reliable design and can start production.

So now you want to advertise your product so that others may buy. You settle down to write the words for the advertisement describing the new device. "Do you want to join Person A's computer to Person B's printer? "What you need is a . . ." A what? There isn't a word to describe a black box. You chew your pencil, scratch your head, have a cup of coffee and, ping, the word pops into your mind: call it an 'Interface'.

So there we have it. An interface was originally just a black box for joining together two otherwise incompatible pieces of kit. The reason that the old ZX Printer didn't need one when connected to the ZX81 or the ZX Spectrum is because Sir Clive designed one unit specifically to work with the others. That is fine as far as it goes but these days a number of recognised standards have evolved and the Sinclair design doesn't come close to any of them.

Sinclair recognised this when he built the Interface One with an RS232 port. The RS232 is a very loose standard but it is better than nothing. It can be murder getting a particular combination to work. For example some equipment indicates 'ready to receive' by pulling a line negative whereas others pull the line positive. Also there is considerable confusion over what constitutes 'transmit' and 'receive'. It all depends on which end you are looking from.

My advice if you are going to buy a printer is to take your computer into the shop and test everything out before you part with your hard-earned cash. Printers aren't cheap.

Matthew is also the winner of this month's free program from you-know-who. As he asked a question about interfacing I have chosen to send him a copy of **Quazatron** because the little robots in the game spend half their metallic lives plugging into one another. Hope you like it, Matthew.



Making a bad Break

I have always avoided answering *Helpline* questions about software techniques for preventing a program from being copied on the grounds that whatever I wrote would have the opposite effect to that intended. I felt that telling readers how to protect their programs would only encourage other readers to break into programs so protected.

I've now decided to relax my self-imposed ban, not because of a fundamental change of heart but because serious techniques for protecting programs have now advanced far beyond that which can be realistically described in a magazine column. Therefore I can outline a simple method of use to the average Sinclair user, secure in the knowledge that the work of the professional software author is not thereby put at risk. This is not to say that the dedicated software pirates cannot break a program protected using up-to-date techniques. It is just that life has now become that much

Your indellible mark

David Cattanach of Bexhill-on-Sea is not so much interested in protecting his programs from prying eyes as attaching his name firmly to the first line. He writes: I have seen Basic programs with the author's name in a Rem statement in Line 0. How can you get a line 0?

The Spectrum editor only allows line numbers in the range 1 to 9999 and so the usual method of entering a line number from the keyboard will not work for Line 0. Similarly once you have a program with one or more lines with line number zero the editor will not pick them up for manipulation or deletion. Thus, this is a simple if unsophisticated way of staking your claim.

Basic line numbers are held in two adjacent bytes in the form: Line number = 256 × first byte + second byte. If you can identify the relevant pair of bytes for a particular line it is an easy matter to *Poke* in a pair of zeros, or any other whole numbers in the range 0 to 255 for that matter.

The address of the beginning of the first line in a Basic program is particularly easy to find because it is held in a system variable called PROG (surprise, surprise). PROG is held at addresses 23635 and 23636 and so the address of the beginning of the Basic area can be displayed using the line: *Print Peek* 23635 + 256 × Peek 23636.

The value displayed is normally 23755 unless some hardware such as the Interface One is attached to the machine. Thus to obtain a program which opens with a line number of zero you should normally *Poke* in: *Poke* 23755,0; *Poke* 23756,0.

harder for them.

It's Leigh Young of Dover who asks: **Can you please tell me the *Poke* to prevent a program from being listed when *Break* is pressed?**

There is one simple, sure-fire way of stopping someone breaking into your program to *List* it. It is to reset the system variable which controls the number of lines used in the message and editing area at the bottom of the Spectrum screen. The relevant system variable is called DF SZ (don't try to pronounce it — there's no point) and is at address 23659.

Normally DF SZ holds the value 2 indicating that two lines are available at the bottom of the screen. You can check this by entering: *Print Peek* 23659. On rare occasions the value of DF SZ changes because more than two lines are required. If for example a long preamble is used with an Input statement, so that the statement spreads over more than one line then the value of DF SZ is increased temporarily. Of course as soon as the *Input* is satisfied the lower part of the screen is wiped clean and DF SZ is reset to two. Clearly it's a bit tricky catching the system variable with another value in it from a Basic program. It can be done however and so I shall leave it as an exercise for the interested reader.

Pressing the *Break* key causes the computer to jump to a bit of code in the Rom which stops the job in hand, does a little bit of tidying up, prints a message at the bottom of the screen and then enters the main loop to wait for further instructions from the keyboard. *Poke*ing the value zero into DF SZ causes the machine to get in a muddle and crash if the *Break* key is pressed because it can't get anywhere to print its message. Hence the good news is that the simple Basic line: *Poke* 23659,0 is a quick way of stopping anyone breaking into your program.

The bad news is that all the other Basic facilities which print in the lower part of the screen will cause a crash if they are used. Thus your program cannot use the *Input* command. If too much material is printed to the upper part so that a *Scroll?* request is triggered that too will cause a crash. There are ways around these problems — *InKey$* can be used instead of *Input* and the *Scroll?* query can be suppressed by *Poke*ing a large whole number less than 256 into the SCR CT system variable at address 23692 as often as is necessary.



Restarting all over

David is also interested in printing on the screen from a machine-code program. He goes on to write: ***I have heard tht the RST 16 instruction can be used. Can you explain how?***

A RST 16 or 'restart 16' instruction is one of eight special RST instructions provided by the designers of the Z80 microprocessor which lies at the heart of the ZX Spectrum. The instructions work rather like the Gosub command in a Basic program in that they force the program to branch to a given location in memory and execute the routine held there, returning to the original place when the routine is completed.

There are other machine-code instructions which have a similar Gosub effect but the eight RST instructions are special because the destination is implicit in the instruction itself. Thus RST 8 causes a branch to address 8, RST 16 causes a branch to address 16 etc. This distinguished them from the group of call instructions which are always followed by two bytes containing the required destination address.

The twin advantages of the RST instructions are that they are both compact (occupying one byte instead of three) and quick to execute. Hence they tend to be used in computers designed around the Z80 for entry points to routines which are frequently used. The entry points also have the advantage of being easy to remember because they are grouped at the bottom of memory (RST 8, RST 16, RST 24 etc).

In the ZX Spectrum address 16 is the beginning of the routine for printing characters on the screen. The routine is entered with the A register set to the code of the charaacter to be printed and the appropriate character appears on the screen at the current Print position. All registers are preserved by the routine except the AF register pair.

The routine listed in Table 1 demonstrates the use of RST 16 by using it to print all characters with codes lying between 32 and 255 inclusive. This includes all the tokens so the routine demonstrates that command words like Poke, Read and Draw *can be printed using RST 16 if required.*

The decimal codes for the routine can be loaded into the printer buffer using the decimal loader listed in Table 2.

The RST 16 facility can also be used to control the screen format and layout character codes but a little care must be taken in order not to follow the Ink, Paper *and other control codes by invalid numbers because otherwise* Error Code *K results.*

Some of these layout characters are extremely useful, for example LDA, 13 RST 16 will print an Enter character so that the current print*position will move to the beginning of the next line.*

Of course, the Print*routine at address 16 was not provided by the manufcturers solely for the benefit of users of the finished machine. The Spectrum Rom itself makes extensive use of the facility and so it is littered with RST 16 instructions.*

This goes some way to explaining the power of RST instructions.

Every time one is used two bytes of memory are saved (the difference between the length of a CALL and a RST instruction) and more importantly the Z80 does not waste time calculating the address which is being called.

Table 1 A Spectrum program to print the characters with codes in the range 32 to 255 inclusive. Note that when the a register contains 255, the effect of the *inc a* instruction is the same as subtracting 255 ie *a* subsequently contains zero.

Decimal	Assembly Code	Comment
62 32	1d a,32	Load the *a* register with 32
245	Again push af	Save *a* on the stack
215	rst 16	Print the character
241	pop af	Retrieve *a* from the stack
60	inc a	Increment the *a* register
32 250	jr nz , Again	Jump to print next character
201	ret	Return when *a* reaches zero

Table 2 A simple decimal loader for pokeing decimal numbers into the Spectrum printer buffer. To halt the program enter *Stop* (Symbol Shift A).

```
10 For I = 23296 TO 23551
20 INPUT J
30 POKE I , J
40 PRINT I , J
50 NEXT I
```

TRANSFORM LTD. Business Software

EUROELECTRONICS ZXL PRINT III CENTRONICS - RS232 PRINTER INTERFACE

Interface £29.95
Cable £8.85
Inc VAT



Enables your Spectrum computer (16 or 48K) to print on almost any dot matrix or daisy wheel printer with RS232 or Centronics input. Just plug in ZXLprint III and LPRINT and LLIST commands will work. COPY works without any software on pson, Star Delta, Brother HR5 & 1009, Gemini, Walters WM80, Mannesman MT80, Kaga Taxan, Cannon, Shinwa, Seikosha 100, 250 & 500. Plus Seikosha GP700 in FULL COLOUR. Also available is optional COPY in 4 colours on CGP115, MCP40 & 80 and SCP80.

No additional software needed — RAM is free to take Tasword 2, Masterfile, OCP +80 software, Kemp Business Accounts etc.

- WORD PROCESSING • PLUG IN FOR LLIST, LPRINT & COPY
- PRINTS SPECTRUM GRAPHICS & UDG's • HIGH RESOLUTION SCREEN DUMPS • TWO COPY SIZES ON EPSON & COMPATIBLES
- PRINTS PRESTEL FRAMES WITH SUITABLE MODEM
- COMPATIBLE WITH MICRODRIVES & INTERFACE 1

Now available! RGB INTERFACE £45.00

SPECTRUM 48K BUSINESS SOFTWARE

BUSINESS PACK. £14.95p
This suite of programs includes Sales Day Book, Purchase Day Book and Business Bank Account. These programs are being used by over 1000 companies to produce VAT and annual accounts; the Purchase and Bank Account programs allow for analyses under 17 subheadings. The Sales programs produce statements of outstanding invoices. Both Sales and Purchase programs calculate VAT.

INVOICING. £15.00p
This program will print out invoices, calculates discounts and VAT. The program will calculate totals from unit prices. Up to 50 accounts with 250 outstanding invoices.

SALES/PURCHASE LEDGER INVOICING £25.00p
This program is for use on microdrive or Opus Disc only. The program will print an invoice using a built-in price list and post the invoice to your customer's account. Will also print price list, statements, labels, etc.

New WORDPROCESSING

TASWORD THREE by Tasman £16.90p
This new version of Tasword is supplied on microdrive with the following features: 128 column print out, tabs, page footers, buffered typing, page headers, full insert mode, bulit mail merge.

TASPRINT by Tasman Software £9.90p
Use this program with Tasword Two to produce 5 different fonts on a dot matrix printer.

SPREAD SHEET

OMNICALC 2 by Microsphere £14.95p
This is the long-awaited micro-drive version of omnicalc complete with histograms and many other features.

STOCK CONTROL

STOCK CONTROL. £10.95p
Handles 900 lines, including details of supplier. Program has full search facilities enabling you to search and update all lines from one supplier.

DATABASES

MASTERFILE by Campbell Systems £14.95p
This is one of the best database programs available for the ZX Spectrum. This program has many uses in a small business.

SUPERFILE. £14.95p
This is a new database program that stores pages of text 64 columns x 22 rows. The program includes word processing and full search facilities.

V-NOTCH. £12.95p
Index and Catalogue System, for collections of photographs, recipes, books, knitting patterns, stamps, etc. Up to 3500 items per file full search facilities.

BUSINESS GRAPHICS

HISTO-GRAPH. £10.95p
This program will enable you to present figures in histograms or pie charts. Displays 3 years as a direct comparison or 5 years to show a trend. A unique feature of this program is that all the figures can be printed with the histogram.

UTILITIES

DLAN by Campbell Systems £7.95p
Use your Spectrum to sell your products. Dlan will display messages in up to 11 different typefaces. Will scroll text in any direction.

TASWIDE by Tasman Software £5.50p
You can use this program within your other programs to display 64 columns on screen.

MF-PRINT by Campbell Systems £6.95p
Enables you to set a print format for your full-size printer within masterfile. Supplied complete with masterfile for **£19.95**.

TASMERGE by Tasman Software £10.95p
Allows you to transfer data from Masterfile into Tasword enabling you to use Tasword for mail merge. The program allows you to specify line and column of each field. For use on micro-drive only.

TRANSEXPRESS by Romantic Robot £9.95p
Micro-drive utility program which will enable you to back-up all your micro-drive cartridges.

TASCOPY by Tasman Software £9.90p
This program allows you to produce 3 sizes of screen copy using Interface 1.

New

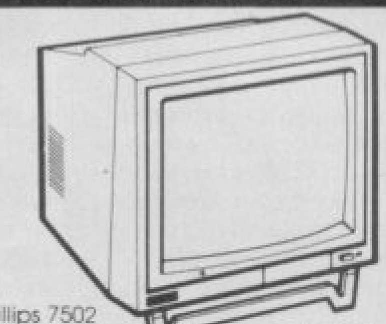
SUPADRIVE £9.95
This program supplied on microdrive allows you to format a cartridge on the spectrum with 100-105K, retrieve corrupted files or print a full catalogue showing addresses and start lines.

ACCESSORIES

Blank microdrive cartridges	£1.99p
Microdrive storage boxes	£4.95p
RS 232 lead	£11.50p
Monichrome monitor connector	£11.50p
RGB monitor connector	£45.00p
Centronics interface	£44.90p
3½" floppy discs	£4.81p
Continuous Paper 2000 sheets	£12.98p
Continuous labels 1000	£6.65p

Add £1.00 post for labels. £3.00 post for paper.

MONITORS



Phillips 7502

	Ex VAT	Inc VAT
Phillips Black and Green	£75.00p	£86.25p
Sinclair QL Vision	£215.00p	£247.25p
Spectrum Monitor Connector	£10.00p	£11.50p

PRINTERS

DOT MATRIX		
Brother M1009	£129.82p	£149.30p
Epson LX80	£199.00p	£228.85p
Taxan Kaga	£210.00p	£241.50p
DAISY WHEEL		
Brother HR10	£245.80p	£282.67p
Brother HR15	£349.44p	£401.86p

Telephone for prices on other printers. Please add **£5.75p** for delivery on both printers and monitors.

DISC-DRIVES

Discovery 1 by Opus 178K	£149.90p
Discovery 2 by Opus 360K	£269.90p

QL

MAILING LIST. £14.95p
This program will allow you to quickly store and retrieve names and addresses from within ARCHIVE. Features include single key functions, prints address labels, exports files to Quill for mailing list; also compatible with our stockcontrol file.

STOCK CONTROL. £14.95p
Keeps a complete record of all your stock items including retail price, trade price, minimum order level, items on order and many other features.

INTEGRATED ACCOUNTS. £89.95p
This new program from Sinclair will allow you to produce full profit and loss account.

PAYROLL. £63.25p
Calculates weekly, monthly or 4 weekly payroll full tax calculations, coin analysis and payment rounding.

CENTRONICS INTERFACE	£19.50p
RS 232 LEAD	£10.00p
MONICHROME MONITOR LEAD	£5.00p

Access

TRANSFORM LTD (DEPT. SU6) 01-658 6350

Mail order only. 24 West Oak, Beckenham, Kent. BR3 2EZ

VISA

TOOL-KIT

```
ORG   60000
LOAD  60000
LD    IX,(23563)
LD    E,(IX+4)
LD    D,(IX+12)
LD    C,(IX+20)
LD    B,(IX+28)
LD    A,(IX+36)
PUSH  AF
```

REVIEW

GRAPHIC ADVENTURE GENERATOR

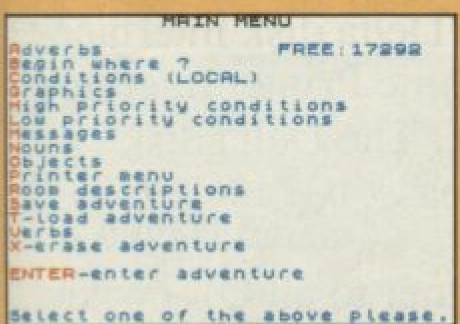
At last it seems there's some real competition for **The Quill**.

Incentive Software has converted its **Graphic Adventure Creator**, originally on the Amstrad, over to the Spectrum and, while it's not exactly cheap at £22.95, don't forget that what you're getting for that price is the equivalent of Gilsoft's **Quill, Patch** and **Illustrator** combined.

As with the Gilsoft suite, the idea of **Graphic Adventure Creator** is to provide a machine-code utility program which provides the framework for producing an adventure. It handles the mechanics, leaving you to concentrate on the plot, locations, objects and description.

To really do a program of this complexity justice could take weeks, but from what I've been able to see so far, Incentive has a winner here.

It's effectively a direct conversion from the Amstrad program. On first loading, you are presented with a menu. You have a number of choices: you can define a room description, you can create a graphic screen, you can specify how the rooms in your adventure link up, what



Main menu

the objects are and where they can be found, what messages the player gets after entering a room, or performing an action. Everything you need to write your own adventure.

The two main parts of the program are the picture designer program — which works just like a simplified graphics package — and the program to set up the network of locations and text for the adventure.

I must admit that I spent most of the time playing with the graphics creator, which is great fun. You get a window which takes up about half the screen, and a wide range of commands; you can draw lines,

FACTS BOX

A very impressive and sophisticated adventure generator. Not cheap, but worth every penny

★★★★★

GRAPICS ADVENTURE CREATOR
Label: *Incentive*
Price: *£22.95*
Memory: *48/128K*
Reviewer: *Gary Rook*

rectangles and elipses, as well as make dots on the screen, and you have a choice of colours — black, white, red, green, blue, purple, yellow and cyan. There are also another two special commands, one is transparency, so you get whatever the *Paper* colour is, and the other seems to reverse whatever colour you're drawing a line across, so if you have a white area next to a black area, the line would be black on white, then automatically change to white on black. The other half of the program is the code which allows the creation of the adventure framework itself. The **Graphic Adventure Creator** allows you to define just about everything you can possibly think of — certainly more than enough to create very complex adventures.

Saying which rooms link up and how is only the beginning: you will want to add riders (or conditions). For example, one room could be dark and players would need a lit lamp to enter it. **Graphic Adventure Creator** lets you set up the logical tests necessary to check if the player has satisfied each stage of the conditions. In this case the player must have previously picked up the lamp and given the command to light it *and* be in the dark room before getting the room description.

Whilst if you want you can have complete control over what is found where, and what messages the player gets and when, you can also opt to make use of the 'Quickstart' data which Incentive gives you.

This is a block of code which you can load in to give you a solid base of commonly found verbs and messages. It will save you an awful lot of time removing much of the mundane routine command setting in each adventure you build.

As well as the **Graphic Adventure Creator** itself and the 'Quickstart' data two other programs are included on the reverse of the tape (just as on the Amstrad version). These are **Advin Man**, a package demonstrating some of the techniques of creating an adventure, and **Ransom**, which is an actual playable adventure, written using the **Creator**.

Finally, if the **Graphic Adventure Creator** is as popular on the Spectrum as it has been on the Amstrad — and it deserves to be — then Incentive hopes to produce commercially a range of adventures, called the Medallion series, written using it. These will be the pick of the programs sent in by people who have bought the system and used it.

The obvious comparison is with the **Quill** suite — if anything **Graphic Adventure Creator** is easier to use and offers more or less equal power.

USING THE GRAPHIC ADVENTURE CREATOR

1) Plan the map of your adventure world carefully before touching the computer — otherwise you'll forget what goes where and why.
2) The first thing is to type the messages automatically associated with each location eg you are in a dark cavern . . . you are in a small palace . . . these are the screen texts always displayed whenever you enter that room.
3) Next are the objects that you may find. The magic scrolls, orbs, keys, gold coins and lit and unlit lamps. You decide where each object is located (to begin with) and, as an extra parameter if you wish to use it — how much it weighs (you might want an upper weight limit on what can be carried, for example).
4) Now sort out the links between rooms — first those which are always interconnected ie you can always move between them without having to fulfill some condition (like have to open a door or light a lamp).
5) Now comes the game logic which is where the truly ingenious adventure is distinguished from the merely dull. Logic involves a series of yes, no conditions along the following lines: If you are in Room 1 and type East and if there is a lamp and if the lamp is lit and if the door is unlocked then print "you crawl through the dank smelly hole" and change current location to Room 4. That's a simple one! Graphic Adventure Creator **allows you to reduce all this to numbers associated with messages, condition markers, *If . . . Then*'s, and allows alternate verbs to be used merely by giving them the same number *ie* if *Get, Grab, Take* and *Scoop* are all number 3 than you can construct your logic so that if any one of the number 3 verbs is present, then go ahead with the action.**
6) The graphics are created using a fairly standard artist designer program — when you have a design you are happy with, simply tell the program what room it is associated with.



LASER GENIUS

TOOL-KIT

ORG	60000
LOAD	60000
LD	IX,(23563)
LD	E,(IX+4)
LD	D,(IX+12)
LD	C,(IX+20)
LD	B,(IX+28)
LD	A,(IX+36)
PUSH	AF

REVIEW

Laser Genius is arguably the most powerful utility yet produced by the Ocean/Oasis partnership, one which will appeal to professionals as much as aspiring amateurs. It's a complete assembler/dissassembler/monitor/debugger machine-code programming suite.

Most assembler/monitors follow tired, predictable formts, unchanged since the dawn of the Z80. The only selling points are how many lines of code can be assembled in so many passes and in how many seconds.

Such things may be important to the most jaded and crusty programmer but for most people compilation time is a minute fraction of the effort put into sweating over writing the code and, worse, then debugging it.

FACTS BOX

Very powerful machine-code tool. Accessible to a beginner, sophisticated enough for a professional

★★★★★

LASER GENIUS
Label: **Ocean IQ**
Author: **Oasis**
Price: **£14.95**
Memory: **48/128K**
Reviewer: *Tony Kendle*

Laser Genius is easily poweful enough to compete by existing standards but also respresents a fundamental rethink about which features make an assembler/monitor useful to most people.

The editor is flexible and simple to use. It behaves as a screen editor in that you can scroll the program and make changes anywhere on screen but the source code is also divided into separate numbered 'paragraphs'. These give you some of the advantages of a line editor as well, eg jump to Line 20, delete Lines 40 to 57. As you type in each Z80 instruction it is syntax checked before being added.

Source code can be loaded in from other assemblers, eg **Devpac** but then it is tokenised making it more compact and faster to compile.

Although it can be fiddly with cassettes it is possible to assemble very long files saved on tape and link several together using the ***Include** command.

There is also a process by which you can automatically include some routines from a large library in your current program. To complement this the graphics source code used in **Laser Basic** will be made available later in the year.

Traditional assembler features such as macros and conditional assembly are supported but there is also a small, high-level logic compiling language, Phoenix, which can be freely mixed with the normal Z80 code.

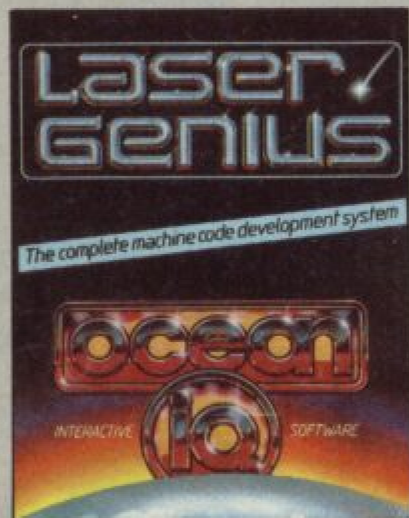
Phoenix provides you with *Repeat. . .Until* and *While* loops, *If. . .Then* and *End. . .If* conditional tests, extended function definitions, variables and arrays and more. Such concepts are typically complex, or at least tedious, to simulate in machine code.

The monitor/disassmebler is typically the weakest part of most commercial packages but the Oasis version has many good points. The screen display is windowed to show a memory dump, the register and stack display and the disassembly. A virtual screen can be defined so that you can switch instantly between the monitor panel and a screen showing the effects of your graphics program.

The various Roms which may be present (48K, 128K, Interface One) may be switched in or out and disassembled.

Code can be disassembled to tape, with labels inserted instead of absolute addresses so that it is ready for re-assembly after modification.

As well as normal running speeds code can be single-stepped or 'slow run' with varying degrees of screen display up-date. Break-points can be set to stop the code or to trigger one of the slow modes.



Most impressive of all is an 'analyser', based on a small and simple Forth-like language. Using this you can effectively 'program' the monitor to behave as you wish. For example, every time register HL is loaded with address *x* you can program it to display the virtual screen. The most obvious application is for intelligent debugging. You can cause a break to occur in response to the most precise and complicated combination of events — something that ordinary break-points just cannot handle. Invaluable stuff.

Microdrives are supported throughout and there are special options for 128K machines, eg Ram page selection.

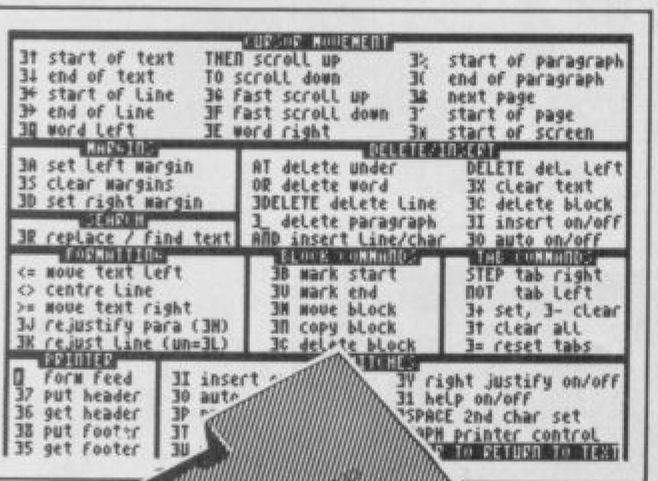
SINCLAIR USER CLASSIC

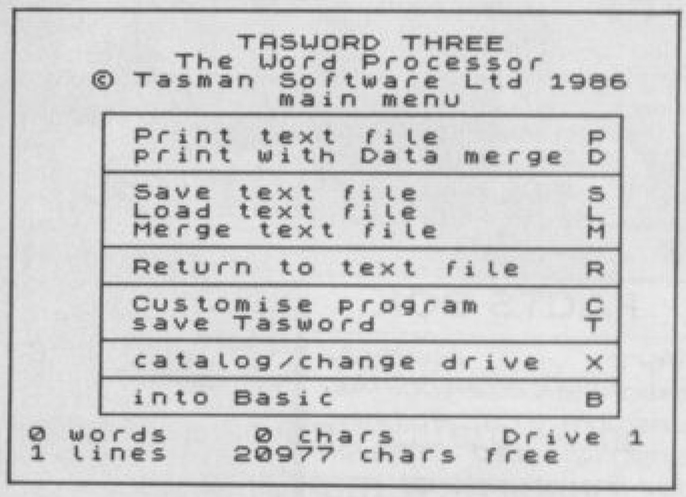
APPENDIX F · ASSEMBLER COMMAND SUMMARY

COMMAND	PARAMETER	ACTION
ASSEM		Clear the assembler's symbol table and assemble the current source text
ASSEMC		Preserve the current symbol table and assemble the current source text
ASSEML		Selectively assemble a subroutine library
BASE	<2,8,10 or 16>	Set the default base used by PRINT and UPRINT
CAT		Display tape disc microdrive directory
CLEAR		Clear the current symbol table
CLS		Clear the visible screen and the editor's copy in memory
CODE	"<string>", <expression1>, <expression2>	Save the block of memory between expression1 and expression2 as a binary file named string
COPY	<line range 1>, <line range 2>	Replace line range 2 with line range 1, retaining line range 1
DELETE		Delete the whole source file
DELETE	<line range>	Delete the specified line range from the source file
ERA	"<string>"	Erase file files named string (Disc Micro-drive only)
EXECUTE	<expression>	Call the code at the address to which the expression evaluates
EXPORT	"<string>"	Save the current symbol table to tape disc microdrive
EXIT		RETurn to whatever CALLed the editor assembler
FIND	"<string>", <line range>	String search
FORM		Issue a form feed to the printer
IMPORT	"<string>"	Merge a previously EXPORTed table with the current table
LENGTH	<decimal integer>	Set the length, in lines, of the printer page to the selected value
LIST	<line range>	List the specified line range of the source file to the screen
LMISSING		List to the printer, all those symbols which the program has referenced but not defined in the last piece of source code assembled, with a field width of 16
LOAD	"<string>"	Load the file named string
LOAD	"<string>", <line range>	Load the file named string and replace the text in line range with the contents of the file
LOADASCII	"<string>"	Load a pure ASCII file named string and produce a tokenised file with 10 statements per line number
LOADASCII	"<string>", <options>	Load a source file named string of the type indicated by options and produce a tokenised file, with 10 statements per line number
LOADASCII	"<string>", <options> <decimal integer>	Load a source file named string of the type indicated by options and produce a tokenised file, with statements per line selected by the decimal integer
LLIST		List the whole source file to the printer
LLIST	<line range>	List the specified line range of the source file to the printer
LTABLE	<decimal integer>	List to the printer, the current symbol table, in the order of its ASCII sort, with a field width given by the decimal integer
LTABLEN		List to the printer, the current symbol table, in numerical order, with a field width of 16
LTABLEN	<decimal integer>	List to the printer, the current symbol table, in numerical order, with a field width given by the decimal integer
LUNUSED	<decimal integer>	List to the printer, all those symbols defined but not referenced, with a field width given by the decimal integer
MARGIN		Set the left hand margin to zero
MARGIN	<decimal integer>	Set the left hand margin to the selected value
MDRV		Direct the assembler to read from and write to, microdrive. Default drive is drive 1 (Spectrum only)
MDRV	<microdrive number>	Direct the assembler to read from and write to microdrive. Default drive is specified by microdrive number (Spectrum only)
MDRV.IN		Direct the assembler to take input from microdrive (Spectrum only)
MDRV.OUT		Direct the assembler to send output to microdrive (Spectrum only)
MISSING	<decimal integer>	List to the screen, all those symbols, which the program has referenced but not defined in the last piece of source code assembled, with a field width given by the decimal integer
MOVE	<line range 1>, <line range 2>	Replace line range 2 with line range 1, retaining line range 1
PRINT	<expression>	Print the signed value of the expression in the current base
PRINT	<expression>, <base>	Print the signed value of the expression in the selected base
REDUCE		Remove all symbols which were not specified as CARGO during the last disassembly, from the symbol table
REN	"<string1>", "<string2>"	Rename a file named string2 string1 (Amstrad disc only)
RENUM	<newstart>, <step> <oldstart>	Renumber source text paragraphs
REPLACE	"<string1>", "<string1>" "<string2>" <line range>	Search and replace
SAVE	"<string>"	Save the source text to a file named string
SAVE	"<string>", <line range>	Save the given line range of source to a file named string
SETSPACE	<decimal integer>	Adjust editing space
STATS		List memory map information
TABLE	<decimal integer>	List to the screen, the current symbol table, in order of its ASCII sort, with a field width given by the decimal integer
TABLEN	<decimal integer>	List to the screen, the current symbol table, in numerical order, with a field width given by the decimal integer
TAPE		Direct the firmware to read from, and write to, tape
TAPE.IN		Direct the firmware to take input from tape
TAPE.OUT		Direct the firmware to write to tape
UNUSED	<decimal integer>	List to the screen, all those symbols defined but not referenced, with field width given by the decimal integer
UPRINT	<expression>, <base>	Print the unsigned value of the expression in the selected base
VERIFY	"<string>", <line range>	Attempt to verify the line range <string> of the source file named against the line range of the source file in memory
WIDTH		Set the width of the printer page to 65536
WIDTH	<decimal integer>	Set the width of the printer to the selected value

TASWOR

THE WORD PROCESSOR – A NEW STANDARD FOR THE







TASWORD TWO led the way in setting a standard for word processing on the ZX Spectrum. TASWORD THREE pioneers the new standard.

TASWORD THREE retains all the features which have made Tasword Two a household name for the Spectrum. With many additional features and enhancements, including a built-in mail merge and up to 128 characters per line, TASWORD THREE is the definitive word processor for the Spectrum and Spectrum+ with microdrive.

ZX SPECTRUM

TASWORD TWO
THE WORD PROCESSOR

TASWORD TWO for the ZX 48K Spectrum cassette £13.90 microdrive cartridge £15.40

"Without doubt the best utility I have reviewed for the Spectrum"
HOME COMPUTING WEEKLY APRIL 1984
"If you have been looking for a word processor, then look no further" *CRASH JUNE 1984*
With 64 characters per line on the screen and a host of useful features TASWORD TWO is the ideal cassette based word processing package for the Spectrum owner.

TASPRINT
THE STYLE WRITER

TASPRINT for the ZX 48K Spectrum cassette £9.90 microdrive cartridge £11.40

A must for dot matrix printer owners! Print your program output and listings in a choice of five impressive print styles. TASPRINT utilises the graphics capabilities of dot matrix printers to form, with a double pass of the printhead, output in a range of five fonts varying from the futuristic Data-Run to the hand writing simulation of Palace Script. A TASPRINT gives your output originality and style! The TASPRINT fonts are shown to the right together with a list of compatible printers.

TASCOPY
THE SCREEN COPIER

TASCOPY for the ZX Spectrum with Interface 1 cassette £9.90 microdrive cartridge £11.40

The Spectrum TASCOPY is for use with the RS232 output on ZX Interface 1. It produces both monochrome (in a choice of two sizes) and large copies in which the different screen colours are printed as different shades. With TASCOPY you can keep a permanent and impressive record of your screen pictures and diagrams. A list of printers supported by TASCOPY is given to the left.

TAS-DIARY
THE ELECTRONIC DIARY

TAS-DIARY for the ZX 48K Spectrum and microdrives. Cassette £9.90

Keep an electronic day-to-day diary on microdrive! TAS-DIARY includes a clock, calendar, and a separate screen display for every day of the year. Invaluable for reminders, appointments, and for keeping a record of your day. The data for each month is stored as a separate microdrive file so that your data for a year is only constrained by the microdrive capacity. TAS-DIARY will work for this year, next year, and every year up to 2100! Supplied on cassette for automatic transfer to microdrive.

TASMAN PRINTER
INTERFACE

TASPRINT PRINTER INTERFACE for the ZX Spectrum £29.90
RS232 Cable for ZX Interface 1 £14.50

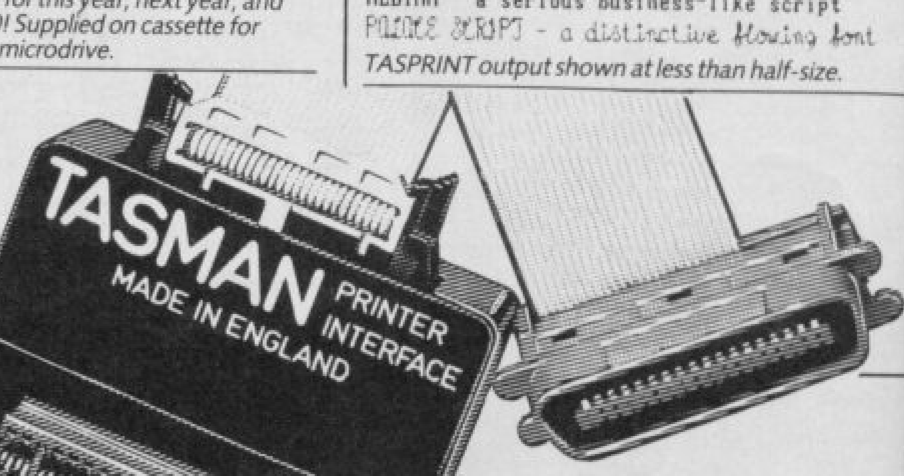
Plug into your Spectrum and drive any printer fitted with the Centronics standard parallel interface. Supplied complete with ribbon cable and driving software. The user changeable interface software makes it easy to send control codes to your printer using the method so successfully pioneered with TASWORD TWO. The cassette contains fast machine code high resolution full width SCREEN COPY SOFTWARE for Epson, Mannesmann Tally, Shinwa, Star, Tandy Colour Graphic (in colour!) printers. TASCOPY shaded screen copy software for this interface (value £9.90) is INCLUDED in this package.

The TASCOPIES and TASPRINTS drive all Epson compatible eight pin dot-matrix printers e.g.

		BROTHER M1009
AMSTRAD DMP 2000	NEC PC8023B-N	BROTHER HR5
EPSON FX-80	MANNESMANN TALLY MT-80	SHINWA CP-80
EPSON RX-80	STAR DMP501/515/5610	DATAC PANTHER
EPSON MX-80 TYPE III	COSMOS-80	DATAC PANTHER II

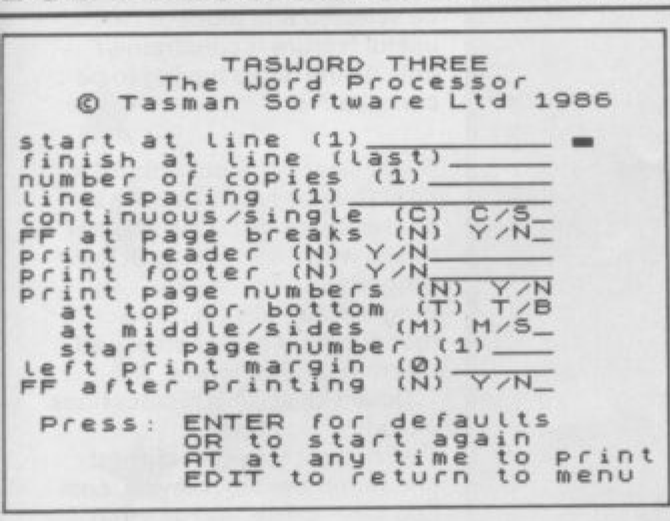
COMPACTA - bold and heavy, good for emphasis
DATA-RUN - A FUTURISTIC SCRIPT
LECTURA LIGHT - clean and pleasing to read
MEDIAN - a serious business-like script
PALACE SCRIPT - a distinctive flowing font

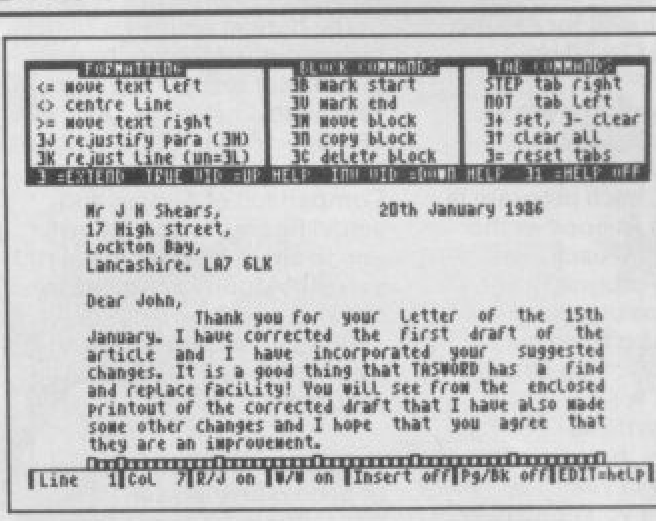
TASPRINT output shown at less than half-size.



D THREE

ZX SPECTRUM AND ZX SPECTRUM+ WITH MICRODRIVE





Please note that TASWORD THREE is only supplied on, and will only run on, microdrive.

TASWORD THREE — *THE WORD PROCESSOR — Microdrive £16.50*

One of a famous family: TASWORD TWO (ZX Spectrum), TASWORD MSX (MSX Computers), TASWORD 464 (Amstrad), TASWORD 464-D (Amstrad), TASWORD 6128 (Amstrad), TASWORD EINSTEIN (Tatung Einstein), TASWORD 64 (Commodore 64)

Available from good software stockists and direct from Tasman Software, Springfield House, Hyde Terrace, Leeds LS2 9LN. Tel: (0532) 438301

TASWIDE

THE SCREEN STRETCHER

TASWIDE for the ZX 48K Spectrum cassette £5.50

With this machine code utility you can write your own Basic programs that will, with normal PRINT statements, print onto the screen in the compact lettering used by TASWORD TWO. With TASWIDE you can double the information shown on the screen!

ZX SPECTRUM 128

TASWORD 128

THE WORD PROCESSOR

TASWORD 128 for the ZX Spectrum 128 cassette £19.95

TASWORD 128 has been especially developed to use the additional memory of the 128K Spectrum. This gives text files that are over 60K long – this is about ten thousand words! TASWORD 128 has all the features of TASWORD THREE (mail merge only when transferred to microdrive). TASWORD 128 is supplied on, and will run on, cassette. TASWORD 128 is also readily transferred to microdrive by following instructions supplied with the program.

SINCLAIR QL

QL is a trademark of Sinclair Research Ltd

TASCOPY QL

THE SCREEN COPIER

TASCOPY QL for the Sinclair QL microdrive cartridge £12.90

TASCOPY QL adds new commands to QL Superbasic. Execute these commands to print a shaded copy of the screen. Print the entire screen or just a specified window. TASCOPY QL also produces large "poster size" screen copies on more than one sheet of paper which can be cut and joined to make the poster.

TASPRINT QL

THE STYLE WRITER

TASPRINT QL for the Sinclair QL microdrive cartridge £19.95

TASPRINT QL includes a screen editor used to modify files created by other programs, such as QUILL, or by the user from Basic. These modified files include TASPRINT control characters and may be printed, using TASPRINT, in one or more of the unique TASPRINT fonts.

Available from good stockists and direct from:

Tasman SOFTWARE

Springfield House, Hyde Terrace, Leeds LS2 9LN. Tel: (0532) 438301

If you do not want to cut this magazine, simply write out your order and post to: TASMAN SOFTWARE, DEPT SU, SPRINGFIELD HOUSE, HYDE TERRACE, LEEDS LS2 9LN

I enclose a cheque/PO made payable to TASMAN Software Ltd OR charge my ACCESS/VISA number: ....

	ITEM	PRICE
NAME ______	______	£ ______
ADDRESS ______	______	£ ______
______	______	£ ______
______	Outside Europe add £1.50 per item airmail.	£ ______
		TOTAL £ ______

Telephone Access/Visa orders: Leeds (0532) 438301

Please send me a FREE Tasman brochure describing your products for: Spectrum____ QL____ MSX____ Amstrad____ Commodore 64____ Tatung Einstein____ SU

Overseas: The following distributors of Tasman products may be contacted for the address of local suppliers. Many products are supplied in translated form. FRANCE & SWITZERLAND Semaphore Logiciels, CH 1283 La Plaine, Geneva. SCANDINAVIA Kelly data, Postboks 43, Refstad, Oslo. NETHERLANDS Filosoft, PO Box 1353, 9701 BJ Groningen. GERMANY Profisoft, Sutthauser Str 50/52, D 4500 Osnabrück. BELGIUM Easy Computing, Avenue Guillaume Lefever 30, 1160 Brussels. PORTUGAL Infomova, Campo Grande 28 4 A, 1700 Lisbon. AUSTRALIA Dolphin Computers, 99 Reserve Road, Artarmon, New South Wales 2064. NEW ZEALAND Software Supplies, PO Box 865, Christchurch. U.S.A. Ramex International, 17620 26 Mile Road, Washington MI 48094.

WORK-OUT REVIEW

OFFICE MASTER

Not that many years ago a suite of seven business software programs like Gemini's **Office Master** would have cost at least £200. Now you can get the lot for £15, on cassette, and £17.50 on Microdrive.

Yes, the programs are all written in Basic which understandably makes them a bit slow. Yes, each program is generally not as good as the market leader in each case. And, yes, the programs are designed to be used with a ZX printer and next to no help is given on using an 80-column printer.

But, despite these shortcomings the whole suite is incredibly good value for money even if you don't need all the programs in the pack.

Two programs do stand out. **Graphplot** is probably the best business graphics package available on the Spectrum.

And **Maillist** is extremely easy to use even if it is not the most powerful of its type. In addition the budget section of **Home Accounts** is likely to find a lot of use.

The seven parts of the suite

Home Accounts: Home accounts is really two programs. One keeps track of your bank account, the other helps control the family budget. Both programs accept data up to a maximum of twelve months, although the bank balance can be carried forward.

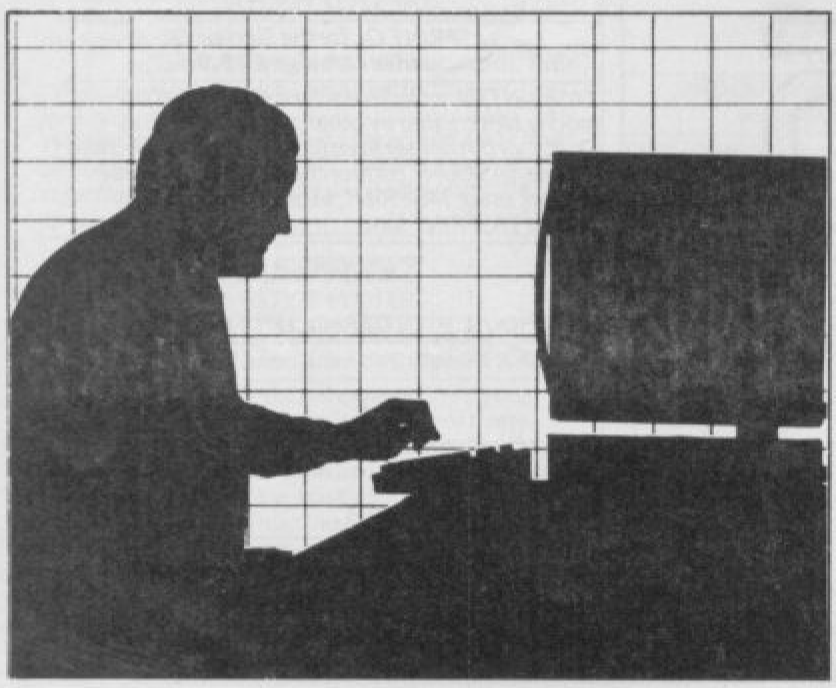
Bank account data is entered as credits of payments. In addition to the date, payee and amount entered for credits, a cheque number can be entered for payments. Entries can be listed in date order only on the screen.

The budget control is much more useful. Monthly budget targets are set up under up to 18 redefinable headings (9 on the 16K Spectrum). Actual amounts are entered monthly. Comparison of budget and actual figures to date allows you to check how far in the red you are! Monthly comparisons are also possible.

Unfortunately, there is no print option in the whole program.

Easiledger: A complete record of up to 800 financial transactions showing the type of transaction, date, account name, amount and invoice number can be built up. There are seven types of transaction varying from cash sales to cheque payments and bank deposits. Despite being able to delete transactions there is no option to only amend an entry and with no validity check on dates users may find correcting entries troublesome.

Details of individual accounts, the bank account and amounts owing and owed are all available as is an overall summary. The limitation on the amount of £66,000 is unlikely to affect most users(!) but the restriction to 8 characters (only 5 of which are printed) for the account names could well be a problem. With account names this is a more useful program for keeping home accounts than the other one provided.



Mailing List: A mailing list is a dedicated database keeping records of names and addresses. Despite being written in Basic this one is one of the best I have come across. It's relatively poweful and easy to use.

FACTS BOX

Obviously not state-of-the-art but functional. Graphplot and Maillist are among the best of their type

☆	*OFFICE MASTER*
★	*Label: Gemini*
★	*Price: £15 (tape) £17.00 (m/drive)*
★	*Memory: 16/48K*
★	*Reviewer:* [signature]

Nine fields including title, company and telephone number can be used for the name and address. A tenth field for a reference is also available. Records can be added, deleted or changed. They can also be examined one-by-one using a *Browse* option. Groups of records can be found by a search on any field. The search on Field 10 is slightly different. A space in the search key is treated as a 'wild card', ie any character and not just a space.

Database: This is a simple card-type database. Each record can have up to ten 19 character fields. These can be either string or numeric. The number of fields, their type and length are defined when creating a new database and need choosing carefully. The numbers of records created and available are shown on the main menu.

The usual *Add, Change, Find, List, Print* and *Delete* commands are all there, but beyond this its features are limited to sorting on a field or totalling a numeric field. There are minor bugs in the Search and Create new file but I found none that are likely to cause major problems.

This type of simple database doesn't give a lot of power but if you only want to store data without manipulating it you'll find it very easy to use.

Graph Plot: Graph Plot is a business graphics package that allows six different types of graphs (including histograms, line graphs and pie charts) to be drawn. Having selected the graph type you then key in the title and the axes labels. These are automatically positioned and cannot be repositioned.

The date is entered from either the keyboard, or tape (cassette or microdrive) and, before this the number of items must be entered. Options allow the data to be replotted in a different form or a sub-set can be selected and plotted. This useful feature is constrained only by the items having to be consecutive.

Stock Control: Stock control for small businesses is usually a matter of scanning the shelves to see what looks cheap. If used properly a stock control program can yield quite a lot of management information and this one is no different.

Details of up to 500 stock lines including reference, description, supplier, current and minimum stock levels, cost and sales prices and unit and reorder levels. In addition the total cost and sales values, the gross profit and the total cost of reordering all understocked items can be given.

Of course you need to spend some time at the keyboard each day or week entering what has been sold and received, but with this it does not take too long. Unlike some systems negative stock values are possible so allowing up-dating on receipt of orders.

Cash Book and Final Accounts: This part of the package is designed for the small business that wants to reduce its accountants' bills and still produce trial balances, profit and loss and balance sheets. Although data on individual transactions is entered it is not kept. The program, unlike **Financial Accounts** from Manx Tapes, works on cumulative totals for eighty-nine preset accounts. Individual details must be printed at the end of a session and the print-out retained to provide an audit trail. Data is entered in batches with the batch total and the number of transactions. Having to calculate these by hand surely defeats most of the purpose of using a computer, in the first place. Amendments to nominal accounts and items such as depreciation can be included via a *Journal* option. All Nominal accounts and their totals can be listed to the screen, alternatively a trial balance showing all non-zero accounts can be printed.

Comparative figures can be produced for the trading account and balance sheet.

COMPETITION ●

SINCLAIR USER

WIN, ROCK 'N' WRESTLE



This month Sinclair User is heaving 100 copies of Melbourne Houses' Rock 'n' Wrestle in your direction — the sawdust and sweat world of professional wrestling world as depicted in 3D action on your computer screen. Grapple with a series of ever more outrageous opponents using a full range of authentic wrestling moves from the humble knee jab to the awe-inspiring overhead spin to grind them into the canvas.

The Competition
To win a copy of Rock 'n' Wrestle all you have to do is study the list of wrestling terms below and choose the bogus term. One of them has nothing to do with wrestling whatsoever. Can you spot which is not a recognised wrestling hold or move?

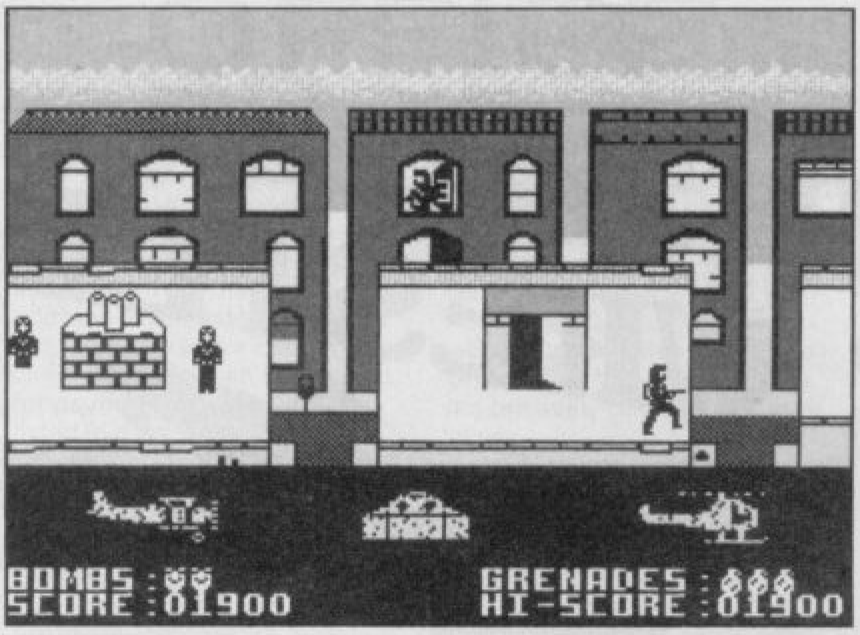
a) Aeroplane spin
b) Simplex
c) Piledriver
d) Singapore sling
e) Half Nelson

Your Answer
If you think you know the right answer write it on a postcard, together with your name and address and send it to Rock 'n' Wrestle Competition, Sinclair User, 30-32 Farringdon Lane, London EC1R 3AU. Closing date for the competition is 18th of July*

*Employees of EMAP or Melbourne House who try to enter will be thrown through the air and clean out of the ring.

COMPETITION ●

ARCADE ★ REVIEW



◄ Leaping across the London rooftops ● Watch the sniper in the window above and avoid the patrolling policeman ● Note the disintegrating game symbols below

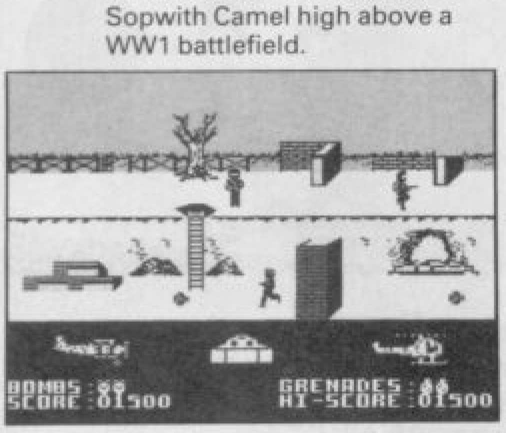
BIGGLES

Biggles — bi-planes, caves and secret weapons, Capt W E Johns could have coped with. But a time warp? Biggles in the 1980s? Helicopters in 1917?

W E Johns, the author of the Biggles books, is probably turning in his grave right now.

Biggles the game, like Biggles the movie is a curious concoction of characters and objects all in the wrong time zones. The bizzare plot hinges on a 'hole' in time which unites Biggles with his time-twin, Jim Ferguson. The time tunnel idea functions as a neat link between a number of seperate games between which the play flips quite unexpectedly, every time you are killed.

You take the role of Jim, rather than Biggles. He's young, American and definitely from the 1980s. One day, without warning, his Spectrum goes Whooosh! and turns into a Sopwith Camel high above a WW1 battlefield.



▲ The caves scene shows Biggles standing by the ladder ● Below are grenades useful for destroying the enemy and pillboxes ● Good news is you can shoot as well

Taca-taca-taca-tac. Bullets stream out as Biggle's arch enemy the evil Erich von Stalhein closes in for the kill. A dog fight ensues, the two bi-planes weave about in an in an almost convincing manner. Anti-aircraft shells pumped from tanks below are surprisingly accurate.

Suddenly you're hit. Whooosh! That familiar sinking feeling — the time tunnel again — and you end up in some caves fighting German footsoldiers. It's all very confusing.

This second arcade game gets underway with you trying to make it to the test site of the enemy's secret weapon. The screen scrolls and your stick-like character trots along firing as he goes. Repeater fire in 1917? Surely not.

Grenades can be lobbed, from a descrete distance at enemy pillboxes, silencing their deadly fire. Get the distance wrong and you'll waste your fire.

The enemy are only intelligent-ish. Once you start running forward, they tend to follow, but stand still and they'll mill around, ignoring you completely. If you get killed then it will be by accident and a stray bullet.

You can't last forever, and soon you'll walk into a bullet when Whiz! Bang! you're deposited with Biggles on a London rooftop in 1986. This is the third arcade game and the only one which leaves you weaponless. Here some nifty toe work is needed if you're to guide the dynamic duo to the secret code which enables you to play the final game, a kind of fight simulation on the other side of the cassette.

There is an aim to each of the four games and they have to be completed in order if you're to get that secret code. It's very difficult because just as you feel you're getting somewhere, you're thrown off-course by a time warp. Three symbols, one for each game, lie at the bottom of the screen and disintegrate each time you're killed. The game ends when one disintegrates entirely.

By that time you will have visited the three battle areas several times.

Although the background is clearly depicted the graphics tend to be a little scrappy but the games play well and smoothly and even the Spectrum *Beep* manages to sound like gunfire.

It's Side Two of the cassette, the final part of your quest, that's the surprise — a neat but simple helicopter flight simulation with an arcade twist. The controls are simple — up, down, left, right, take and drop. The graphics are fairly comprehensive and there is a range of instruments which guide you when landing and taking off.

You can toggle between two maps — I found the radar map which shows enemy outposts and the positions of landing pads the most useful. Flying at an altitude of 500 feet, set a course for your first drop — the allied camp. There you can choose what objects and which of Biggles' mates you're going to take with you. The secret weapon can only be destroyed if you have the right combination. Marie, a secret agent must be found and picked up to guide you to the next location.

The graphics are excellent. When you put the nose of the aircraft down the objects on the ground become recognisable as people, tanks, trees etc. They don't get larger as your altitude decreases, though, so you have to depend on your instruments. When you land, you'll be told if there is anything there for you to take. If not, take off and try elsewhere.

Biggles has something for everyone. For £9.95 you get three arcade games and a pretty good flight simulator. If the graphics are on the simplistic side, the play itself is often very challenging.

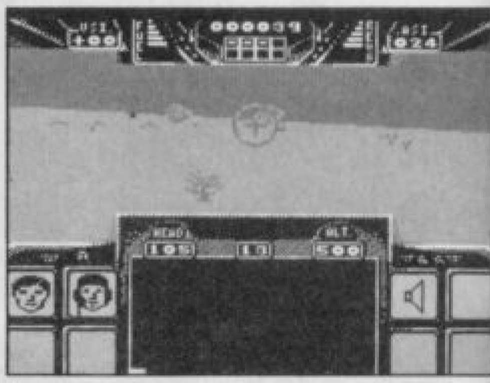
The link between the first three sections is unusual and the constant changes of scenery add to the difficulty.

FACTS BOX

Four games for the price of one. Some tricky challenges make this one of the better film tie-ins

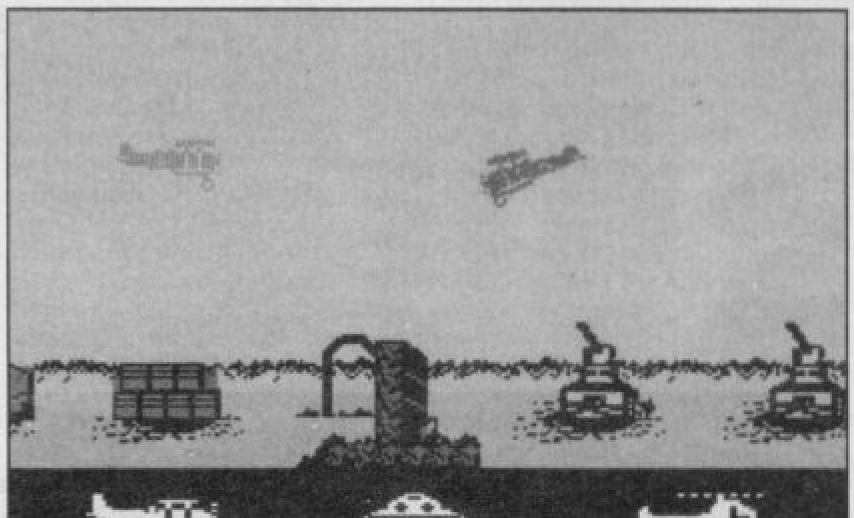
★★★★

BIGGLES
Label: Mirrorsoft
Price: £9.95
Memory: 48K/128K
Joystick: various
Reviewer: Clare Edgeley



▲ The helicopter flight simulation of the other side of the tape ● The left-hand side shows who's in the chopper ● And on the right you see the object collected

▼ Dogfight to the death ● Biggles flies the left-hand plane ● Bomb the fuel dumps on the left for extra bombs ● And blast the tanks before they shoot you



DISCOVERY CRUSHES THE COMPETITION

NOW ONLY £99.95 + VAT





All this for only **£99.95**. And now there's even more!

- ✱ FREE TRANS-EXPRESS UTILITY PROGRAM — TRANSFERS YOUR FAVOURITE TAPE SOFTWARE TO DISC
- ✱ CHOICE OF DISCOVERY FOR THE 48K OR 128K SPECTRUM
- ✱ FULL 12 MONTH WARRANTY
- ✱ COMPREHENSIVE USER MANUAL
- ✱ OPUS DELIVERY PLEDGE

The Opus package is unbeatable value. We guarantee you delivery within 72-hours of receiving your order and it's absolutely **FREE.**

To order your Discovery call the Opus Sales Hotline now on **0737 65080** or post the coupon. Dealer and Education enquiries welcomed. Special export rates available.

At an amazing £99.95 Discovery deals a crushing blow to every Spectrum disc drive system on the market. Now it's not just the best equipped disc drive you can buy, it's also the cheapest.

Choose Discovery and you'll find a system packed with brilliant features:

- 3½" 250 K DISC DRIVE
- DOUBLE DENSITY DISC INTERFACE
- JOYSTICK INTERFACE
- PRINTER INTERFACE
- VIDEO MONITOR INTERFACE
- RAM DISC FACILITY
- BUILT-IN POWER SUPPLY FOR DISCOVERY AND SPECTRUM
- SIMPLE ONE-POINT CONNECTION

To: Opus Supplies Limited, 55 Ormside Way, Holmethorpe Industrial Estate, Redhill, Surrey.
Please rush me the following: (PRICES INCLUDE VAT AND CARRIAGE)

______ DISCOVERY unit(s) at £114.94

I enclose a cheque for £______ or please debit my credit card account with the amount of £______

My Access ☐ Visa ☐ no. is: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

MY COMPUTER IS: ☐48K ☐SPEC.+ ☐128K (tick box) SU

NAME ______

ADDRESS ______

______

TELEPHONE ______

Opus.

Just doing the mouse-work

Anyone who has used QL **ICE** — the Icon Controlled Environment from Eidersoft — will know that the one thing it needed desperately was a mouse. Now it has one.

For the uninitiated **ICE** is a program, held on Eprom, that takes over the QL as soon as you power up. It uses icons, graphic motifs, to represent various features of the QL, such as the Microdrives. By moving a pointer on to the picture and pressing a button this feature is then called into use.

In the past the pointer was moved using the arrow keys, a slow and laborious method. With the mouse you can zip the pointer to where you want it quickly and easily.

The problem with **ICE** is that while it insulates you neatly from the QL, even with a mouse it can slow you down. For example, all my commonly used discs and Microdrives have a **Boot** program. To use them I just reset the QL, press *F2*, or *F1*, and I'm into the program. With **ICE** you press *F2*, move the pointer to the disc icon, click a button, find the *Boot* icon — which may or may not be on the first 12 files that **ICE** can display at a time, and then click on the icon.

Where **ICE** is most useful is in copying files or making a back-up but again the **Toolkit II** program from Care, or the little known **Toolkit** from PCML — both Eprom based — can perform the same functions with the minimum of typing using the SuperBasic extension *WCopy* (command — standing for Wild card copy). Both of these programs also contain a host of additional features not found on **ICE**.

This may seem an unfair criticism of **ICE** but the whole point of it, as I see it, is to make life easier for the user and not just to present them with a pretty screen to amaze their non-computer-using friends.

As a further example, there is a menu bar running along the bottom of the screen with options to *Rename, Back up*, or *View* files and/or *Customise* **ICE**. If you select the *Customise* option a pop-up — as opposed to pull down — menu apppears from which you can select further options. The *Customise* option has to be selected using the mouse, you then have to return to the keyboard to select the sub-options, and in some — but not all — cases return to the mouse to make your selection.

The best use of the mouse is shown with the **ArtICE** program that comes with it. Here the mouse is truly useful, allowing you to draw things that would take infinitely longer with a joystick or the cursor keys. This is not the place for a full-blown software review but suffice it to say that **ArtICE** is an excellent program with all the features you are likely to need.

Bearing in mind that I was using a pre-release version of the software — although the non-mouse version has been around for a while — there were only two areas that needed some attention. *Fill* fell down on the very complex shapes and the printer dump section didn't — at least it nearly did, but left blank lines in the middle. I had to use Psion's **QDraw** to produce the screen dumps for this review.

On the hardware side the mouse is well made and packaged. The only connection to the QL is via a small box which plugs into the Rom slot. The mouse has three buttons on the top edge. The middle and right ones simulate a 'double click' while the left one produces a single click. Essentially they operate as two distinct functions.

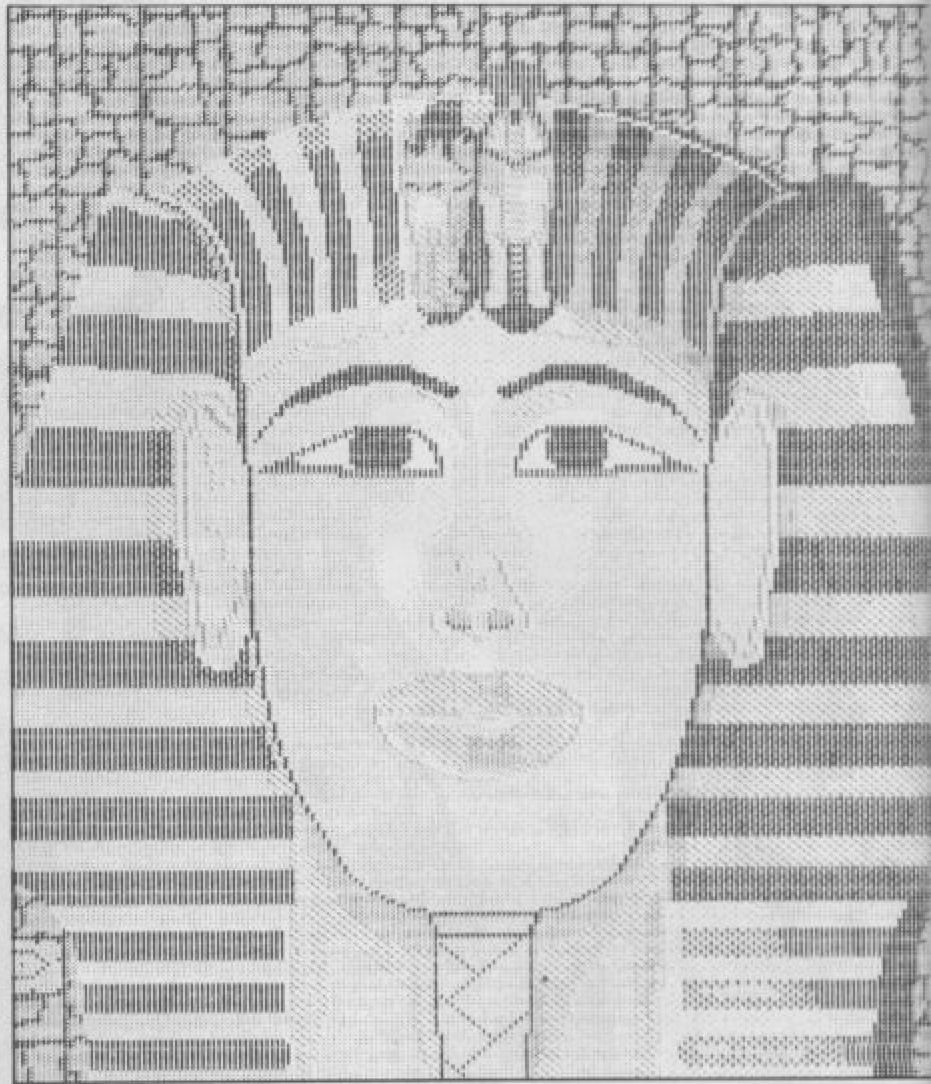
The mouse is only usable with programs that have been adapted for it, ie, you cannot use it with the Psion programs, but Eidersoft has produced a **Toolkit** program which allows you to insert mouse-reading routines in your SuperBasic or machine-code programs.

The more I used the Eidersoft mouse the more I found it interfered with what I wanted to do. Initially it was fun to play with, call up the in-built calculator, and generally 'push all the buttons'. But the novelty soon wore off and it became a pain to use.

In order to avoid any possible bias on my part, ie as I am more used to an unICE'd QL, I let a couple of infrequent users loose on it. Their verdict was the same as mine so I rest my case.

The mouse is priced at £89.95. (£69.95 if you trade in your old pre-mouse copy of **ICE**.)

John Lambert



An idea of what ArtICE can do

Getting everything past the sensor

On its own a computer is pretty useless. It's only when it is given some form of input — like a keyboard — and an output, for example to a TV, that you can do something with it.

But why stop there? A computer like the Spectrum can, with the right input/output (I/O) ports, do a great deal more: switch on and off electrical appliances, control robots or turtles, react to all sorts of electric sensors.

The whole area of control applications for home micros is still quite young and using your micro to throw relays to work household appliances or simple robots is still something for which you will need a little knowledge of basic electronics.

A good place to start, though, is with the Interpack 1 from DCP. The small 'black-box' device offers a varied range of I/O ports and is available from Commotion, which specialises in control applications, turtles and robots.

The Interpack provides three ports.

Port A has an 8-channel ADC — Analogue to Digital Converter. What this does is convert any voltage applied to one of its channels of between 0V and 2.5V into a number which the computer can read. The size of the number corresponds to the voltage: the higher the voltage the higher the number. For example if the voltage came from the output of a volume control the computer could tell me when it was too loud, or if the same control was put into the joint of a robot arm the computer could tell what angle it was set.

Port B is both an input and an output. The output is in the form of four relays it can turn on and off, which in turn could power electric motors in a turtle or low-power lamps. The input is in the form of four contacts which can detect if a switch has been turned on. These could be used in a burglar alarm to sense when a window has been left open, or on a turtle to see if it had run into something.

All connections to these four Part B relays are via small jack plugs, like those used by Lego in its electronic kits.

Lastly, Port C provides eight lines of TTL-level I/O. These are

Going to the 'proms'

Putting an Eprom programmer on the QL seems rather a mundane use for what is after all a sophisticated computer. Such devices are available for the ZX81 upwards and all perform, ultimately, the same function.

The difference between most of them and the QJump QEP 111 is that the latter has been designed by Tony Tebby. It is as far from most designs as a model 'T' is from a Rolls Royce.

As with nearly all QL peripherals it plugs into the user port on the left-hand end and is the same size as a normal disc interface. As there is no through port, on the end of it is a ZIF (Zero Insertion Force) socket for the Eproms, you will need a two-way adaptor to use it with discs.

All power for the device is taken from the QL and it is called into use by a new SuperBasic command *Eprom*. From this point on all its functions are selected from a series of menus. The first item — *Option* — intially calls for a choice of Eprom, (see Fig. 1) and then displays it graphically on the left of the screen. Next time this option is called you are given a further list of options, displayed in a window on the right. These cover every possible eventuality (see Figs 2 and 3) and, bearing in mind the wide range, includes a useful option to save them as a configuration file.

When the QL was first released it quickly became a popular 68000 development machine. The QEP 111 will give it a new lease of life as the ultimate Eprom programmer.

Details from QJump, 24, King Street, Rampton, Cambridge CB4 4QD

John Lambert

Table 1 permitted Eproms

2716
2732
2532
2764
2564
27128
27256
27512

Table 2 Main menu options

Options	See Fig 3.
Fill	Fills memory with 00 or FF.
Load	Loads data into memory or loads options file.
Save	Saves data from memory or creates an options file.
Edit	Allows you to edit 256 bytes of memory at a time in ASCII or Hex.
Read	Reads Eprom into memory.
Check	Checks Eprom is blank or that it can be over programmed.
Program	Self explanatory.
Verify	Verifies Eprom against memory.

Table 3 Operating parameters

Device	See Table 1.
Jumble	Allows printed-circuit board layouts to be simplified by connecting data or address lines as convenient rather than the manufacturers convention. For example, if it is easier to wire up D0 as D7 and vice versa it allows the Eprom to be programmed as if this were the case.
Variation of voltage	Ideally C remains constant but in practice it can alter by up 20 per cent allowing for temperature variations. This allows you to verify the Eprom at 0, 7, 13, 20 per cent.
Programming voltage	12.7V, 21V or 25V.
Algorithm	Four programming algorithms are provided: standard, two interactive plus a fast, accelerated interactive.
Over-programming	Allows over-programming if possible.
Set of Eproms	If you want to use Eproms on a 32-bit data bus you need four Eproms per set. In this case it programs one byte from each long word into each Eprom.
Range in Eprom	Allows for only part of the Eprom to be used.
Eprom base address	Self explanatory.
Memory base address	Self explanatory
Test	Provides test voltages.

the sort of signals computers and similar equipment easily recognise. These are more for the electronic enthusiast who wants to wire up the latest piece of wizardry.

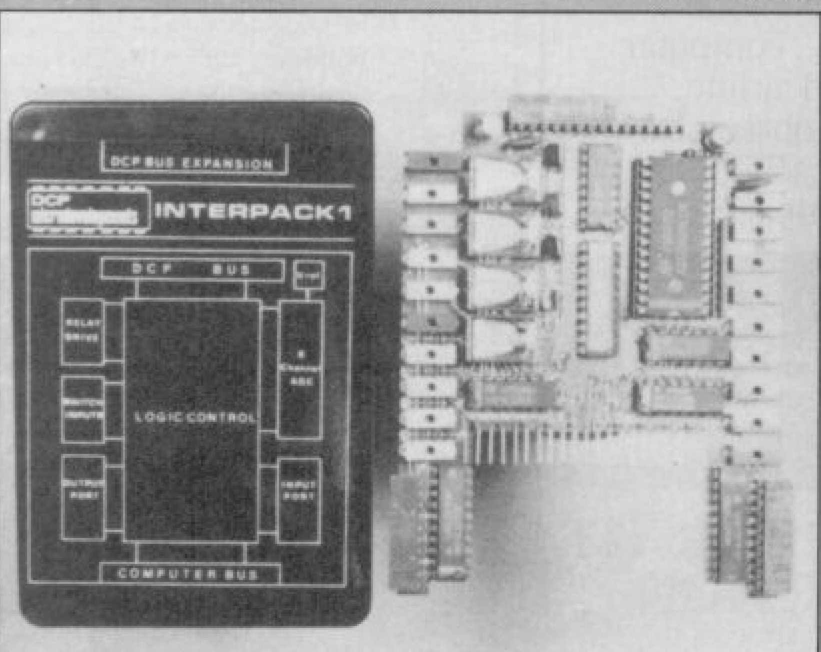
At the back of the Interpack 1 is another set of connectors for other DCP products which provide yet more I/O.

The Interpack 1 is a useful low-cost introduction to I/O, robotics and computer control. If you want to get more out of your computer, put your thinking cap on and make your Spectrum earn its living.

Interpack 1 is £49.95, and ZX Intercard — the accompanying software module for the Spectrum — is £14.95.

Both are available from Commotion, 241 Green Street, Enfield EN3 7SJ (Tel: 01-804-1378).

John Lambert



SURGERY

Sinclair Surgery

Spectrum on the blink? John Lambert has a cure

Alphacom signs up

AFTER READING that **Tasprint** doesn't work with the Alphacom 32, do you know of any good programs which work with it?
Jon King,
St Ives,
Cornwall

● *Buttercraft Software produces a sign designer program which works with the Alphacom 32. Contact them at 14 Western Avenue, Riddlesden, Keighley, Yorkshire.*

Opus in focus

I HAVE a 48K Spectrum, Alphacom 32 and am thinking of buying a disc drive and Gemini's **Office Master** suite of programs.

If I connect an Opus Discovery disc drive to the back of my Spectrum, the cassette load port will presumably be covered and I will be unable to load programs? Will the cassette port be inoperative if a disc drive is connected?

I have spoken to Gemini with a view to buying the program, but they seem unable to tell me how to transfer the program to disc — assuming I can get a tape version into the computer with a disc drive connected.
D F Allen,
Clondalkin,
Dublin

● *You can use cassettes with Discovery 1 fitted, just connect the leads before plugging it in.*

Transferring programs from cassette to Discovery is another problem, especially commercial ones. All you can do is keep on at the software house in the hope that they will provide a solution.

Printout impossible

I HAVE a problem of non-compatibility between my Spectrum 48K and Alphacom 32 printer. I can obtain printouts from within programs with one exception — **Cyrus-IS-Chess.**

When requesting a printout of each move made or of the board, the print is illegible.
M Davies,
Biggin Hill,
Kent

● *The Alphacom 32 printer — despite claims to the contrary is not the same as a ZX. Some programs, such as* **The Hobbit**, *will not print out to it correctly. There is nothing you can do about this!*

Paper assistance

I HAVE just bought a Timex 2040 printer. My problem is paper — I have tried all over Edinburgh without any luck. I would be grateful for any assistance.
John Welsh,
Penicuik,
Midlothian

● *You can use paper for the Alphacom 32 in the Timex 2040 and vice versa. Contact Dean Electronics on 0344-885661 for the Alphacom paper.*



Searching the Cosmos

I HAVE a Cosmos 80 printer which has been giving me some minor trouble. I do not know who to contact to obtain a new print head, can you give me the name and address?
J Kirby,
Linlithgow

● *To be honest I've never heard of a Cosmos 80, can any readers help?*

The stubborn Artist

I HAVE a Citizen 120D printer and am having great difficulty persuading my Spectrum Plus to print out **The Artist** and other programs. There must be some way to program the Spectrum to print out on my computer?
Janet Watson,
Royston,
Hertfordshire

● *Whether a printer will work with certain programs depends on the printer interface used. In all cases contact the software house first.*

Regarding the pound sign problem with **Tasword Two**, *there is a simple solution — which works with most printers — and a difficult one which only works with up-market printers such as the Citizen 120D.*

The easy way is to set the dip switches so that either the printer powers up using the English character set and you then use the hash (#) symbol on screen, or you set it to use the USA character set and then use one of the graphics symbols to switch character sets. See the May 1985 issue of Sinclair User *for further details.*

The only problem is that you cannot use the pound sign on screen. The other method displays the pound sign but is rather complex.

Firstly, set the dip switches so that the printer powers up in IBM mode. Next copy the standard character set to Ram — Esc : then design a pound sign and send the necessary codes to the printer for it to appear as Character 96 — see page 131 of the Citizen manual. Lastly, switch to the Ram-based character set.

Power deficient

EVERYTIME I turn on my Spectrum I get a purple screen with different coloured blocks flashing on and off. I have to move the plug for the screen to come back to normal. The same happens to a friend's computer. Are they both faulty?
Philip J Cassidy,
Dublin,
Ireland

● *It sounds as if you have power — or rather lack of power — problems. At a guess, the power socket on the back of the Spectrum is loose, try resoldering it to the PCB or take it to a repairer.*

Riddle of German notes

I HAVE a problem with my Brother HRS printer, on which I am unable to reproduce screens because it does not work with a *Copy* command. I wrote to



Centronics and they sent me a sheet about the Epson copy which adds a new command — *Draw★*.

The problem is that my manual is written in German so I don't know which codes to use.
S. Donnelly,
Portadown,
Co Armagh

● *The simplest solution is to obtain an English manual. Try both Brother and Centronics agents as these two companies are both owned by the same Japanese company.*

No to 128K upgrade

CAN YOU up-date a 48K Spectrum Plus to a 128K Spectrum? If so, how much will it cost?
Lee Widdowson,
Rotherham,
Yorkshire

● *In a word, no. There was one hardware company working on an up-grade but the last time I saw them they had their heads in their hands. I don't expect anything from them for a while.*

Supertoolkit makes a welcome return

John Gilbert investigates the strange powers of Tony Tebby's new utility

Tony Tebby, author of QDOS, has for some time been regarded as the true father of the QL. Now **Supertoolkit II**, which he was written, has arrived to reinforce that opinion.

The tookit patches up many of the bugs found in QDOS and adds several new commands and functions to SuperBasic.

Five types of procedure are available: display and peripheral controls, memory management, file management and job control. All of those are contained on a Care Electronics Rom cartridge which slots into the back of the machine.

Displays

The display procedures include a full screen editor, auto line number facility, a fount controller, an easy way of switching between monitor and TV window defaults and an alarm clock.

The editor can be invoked on any of the default windows or in a window which you have opened. It starts with Line 10 and increments in steps of ten after each line of SuperBasic is finished until you press *Ctrl+Space*.

If you have the good fortune to own Tony Tebby's advanced QL User Guide you will know that the machine has two founts of characters. The first fount supplies the default character patterns and if the second fount is switched into operation its patterns are displayed. With **Supertoolkit** you can build your own character founts in Ram and switch them on for display. For instance, you could build up a foreign alaphabet or, if you want, a set of *Space Invaders*. The new founts do not need to tag the same character values as the defaults so you could store and switch in several new character sets.

Graphics in some SuperBasic programs require definite setting of either the monitor or television default windows to be effective — the screen dimensions are different. Unfortunately, a switch between the two modes is not available through SuperBasic and you have to reset the machine. **Supertoolkit** gets round the problem with the commands *WMon* and *WTV*. A numeric parameter after the command tells the QL which mode, either four or eight colour, the display should use.

A digital clock can be switched on to any of the three default windows and it will continue to up-date on the seven even when the microdrives, network and RS232 are accessed. The clock is set using two numeric parameters which represent minutes and hours — the seconds are set automatically when you enter the command. Optional parameters can be included after a string specifier to set up the date. The alarm is set up using two numbers — representing a 24-hour clock. The first shows the hour and the second the minutes.

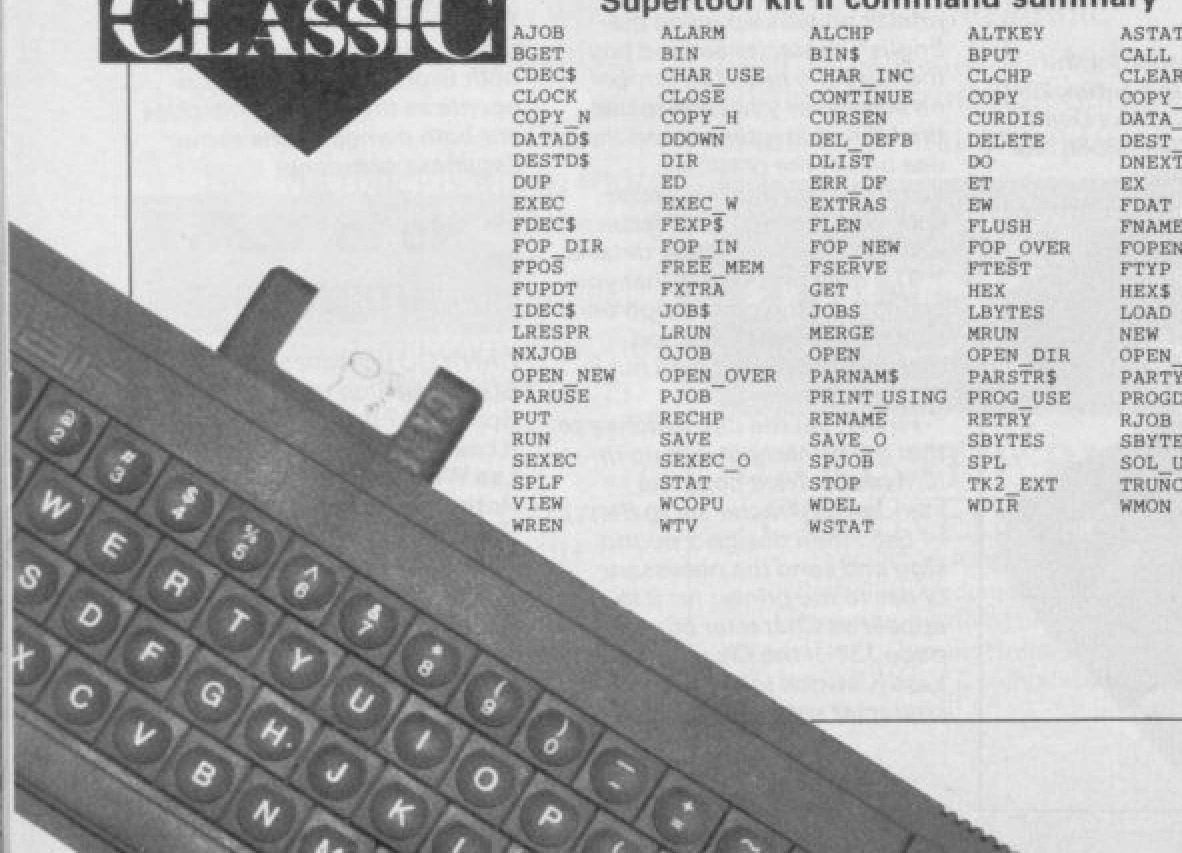
Networking

Peripheral control commands allow direct, flexible access to the network and RS232. The network facilities have been substantially improved considering the impoverished hardware available within the QL.

SINCLAIR USER CLASSIC

Supertool kit II command summary

AJOB	ALARM	ALCHP	ALTKEY	ASTAT
BGET	BIN	BIN$	BPUT	CALL
CDEC$	CHAR_USE	CHAR_INC	CLCHP	CLEAR
CLOCK	CLOSE	CONTINUE	COPY	COPY_0
COPY_N	COPY_H	CURSEN	CURDIS	DATA_USE
DATAD$	DDOWN	DEL_DEFB	DELETE	DEST_USE
DESTD$	DIR	DLIST	DO	DNEXT
DUP	ED	ERR_DF	ET	EX
EXEC	EXEC_W	EXTRAS	EW	FDAT
FDEC$	FEXP$	FLEN	FLUSH	FNAME$
FOP_DIR	FOP_IN	FOP_NEW	FOP_OVER	FOPEN
FPOS	FREE_MEM	FSERVE	FTEST	FTYP
FUPDT	FXTRA	GET	HEX	HEX$
IDEC$	JOB$	JOBS	LBYTES	LOAD
LRESPR	LRUN	MERGE	MRUN	NEW
NXJOB	OJOB	OPEN	OPEN_DIR	OPEN_IN
OPEN_NEW	OPEN_OVER	PARNAM$	PARSTR$	PARTYP
PARUSE	PJOB	PRINT_USING	PROG_USE	PROGD$
PUT	RECHP	RENAME	RETRY	RJOB
RUN	SAVE	SAVE_O	SBYTES	SBYTES_O
SEXEC	SEXEC_O	SPJOB	SPL	SOL_USE
SPLF	STAT	STOP	TK2_EXT	TRUNCATE
VIEW	WCOPU	WDEL	WDIR	WMON
WREN	WTV	WSTAT		



QL Karate

Perfect precision of mind and body are required if you are to pass the tests set for you by the holy men at the temple.

Yup! This is the first Way of the Fist/Tiger **title for the QL — and excellent it is too.**

The first level, which takes place outside the temple is easy enough. You're in the left-hand corner, wearing green; your opponent, stage right, wears white. A great variety of punches, chops and kicks are available to you and there are two modes of attack. The first, which is the least aggressive, uses only the direction keys or joystick directions without the fire button depressed. If you push up your fighter jumps in the air, down will put him in a squat, down/right gives a forward jab and up/left is a face block.

When the fire button is pressed you can do backward somersaults, squat and kick, leap into a flying kick and shin kicks. They are the most aggressive attack moves and, if you want to get past the first level, your thumb will spend most of its time on the fire button.

Vroom

The excitement of the race track has been lovingly, if not faithfully reproduced by Pyramide, the French company whose penchant for those green and red 3D glasses gave it a first-time hit with QL Wanderer.

QL Vroom **continues the company's range of good quality products. It puts you in the seat of a formula one racing car which can reach speeds in excess of 350 mph — or is it kph? A plan of the course is drawn at the start of the game and a set of traffic lights gives you the cue to rev up with a push of joystick or cursor key.**

Your progress is shown on the map — by a flashing blip — and on the 3D display. The course starts with some straight lengths and you're not much bothered by other cars or signposts. The first bend, however, is a frightening initiation. It's a tight loop and you're bound to meet other cars — which you're supposed to overtake — and signposts which pop up at irregular intervals and write off your car if you are too near the edge of the track.

After one lap of each of the five race circuits your score depends upon your average speed and a bonus which takes into account the number of cars you have overtaken. Crashing into cars or signposts is reckoned to be a bad thing and penalties are awarded against you. If you manage to knock up a high enough score, without crashes, you qualify for the next round.

Each circuit demands split-second timing, and a fair amount of luck. You should not only slow down when you're taking bends but also when you are overtaking or when you approach a signpost. Not only that, the steering controls become quirky when you

Your strength, and that of your opponent, is shown as a horizontal bar on the status window at the top of the screen. When you land a direct hit on your opponent a star appears at the point of impact and his strength rating decreases. If your bar disappears you lose one of three lives and must restart on the same level. Beat your opponent and you go to the next stage of initiation.

The second level is similar to the first but you are matched against two opponents rather than one. If you thought Level 1 was easy you'll find Level 2 almost impossible.

Fighting two karate masters with combined strengths is difficult. There's no let up in the blows that rain down upon you and if you run away they'll follow. If you're lucky you'll defeat one of the opponents before your strengh disappears but two of them is almost impossible.

I couldn't get past Level 2, yet I managed to attain sixth dan in the Spectrum version of Way of the Exploding Fist.

If you do manage to get past Level 2 you are assured of yet more opponents and a variety of colourful backgrounds. QL Karate would not stand a chance if it was a Spectrum game — mainly because there are so many other good karate programs — but on the QL it's great.

If you're tired of playing chess, chasing blobs around a screen or moving spaceships around a massive maze, QL Karate's a knockout.



Publisher Point Blank, 151 Dartmouth Road, Willesden Green, London NW2 4EN
Price £12.95
Joystick
★★★★★

From two to 63 QLs can be linked in a net chain using the command *Net* followed by the station number. A new protocol which provides handshaking has been included in the toolkit. Your station can listen for input from a selected QL or from any of the QLs on the net. A buffer is set up within the receiving station so that the QL can receive whole messages rather than receive them in bits.

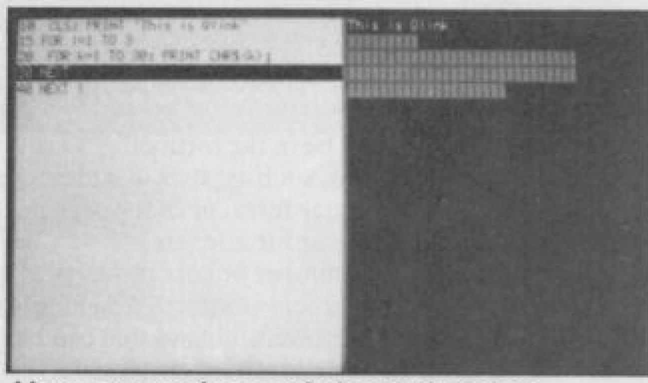
You can also access ten peripherals on any net station using the toolkit's file server procedures. For instance, your QL could access the files from the disc drive of another QL.

accelerate to high speeds. The lower speeds show up the difficulties which programmers have with the QL screen. The 3D display is intricately created with details such as skyscrapers, a light house with a flashing light, a ship on the horizon and the Golden Gate bridge. Everything moves without a hint of flicker when you're travelling at more than 100 mph, but when you slow down the seams begin to show. The flicker is not the programmer's fault — and it's not especially pronounced. But it is there.

Compared with English Software's Hyperdrive the Pyramid race simulator contains less action but arguably better and more varied graphics. If you've played Atari's Pole Position in the arcades you will only be a little disappointed with Vroom, but that's because of the speed at which your racer travels — again, that's the fault of the QL design. Looks like another hit for Pyramide.

Publisher Pyramide Software
Price £14.95
Programmer Daniel Macre
Joystick
★★★★





List a program in one window and produce its Run *output on another*

Supertoolkit II includes a message send/receive facility. All you need is a simple SuperBasic routine which will open a window on the QL screen and send or receive data. The procedures will accept SuperBasic graphics such as lines, circles and ellipses, but not transmit messages written using characters from user-designed founts.

Memory matters

Memory management and file maintenance commands form the bulk of the toolkit extensions. The former allow you to claim and release areas of user-Ram from SuperBasic rather than having to play around with a disassembler. The functions calculate the amount of free memory and find space in the common heap for machine-code storage.

File maintenance procedures relate mainly to microdrives but can be made to manipulate disc files if a channel is opened

to the relevant devices. An extended set of directory commands has been included. Those will *List*, *Delte* and *Rename* files under a wildcard system. For instance, you may want to delete five machine-codde files from a directory. All of them have similar, generic names, and can be deleted using one command.

The problem of having to delete a file before saving one with the same name has been eliminated with a *Copy* and *Overwrite*.

The instruction can be used between any file devices including microdrive, disc and net. If a file already exists on a medium the *Copy* procedure stops and asks if you want to overwrite. If you type *Y* the new version of the file is slotted into the directory.

Tony Tebby has extended the facilities for *Opening* and *Closing* data files. In the Basic version of QDOS you must choose a specific number tag for a file. The commands available through the toolkit, however, will find an unused file for you. You can also re-open files which are already open, overwriting the contents of the old one.

Direct access

Although microdrives are serial access devices they can be made to mimic the random access facilities of floppy disc drives — though of course with some decrease in speed. A set of commands are provided to transfer and pick out raw data from a microdrive file.

The data can be in the form of individual bytes, such as parts of a message stored in character form, or in the internal SuperBasic format for integers, floating-point number or strings. As you can gather the process requires some idea of how files are structured and that can be found in Tebby's advanced user guide.

Your program will have to be able to find out the position of items within a file and transfer them to variables or arrays so that they can be manipulated within SuperBasic. Data can be manipulated in a number of formats which include decimal, fixed format decimal, scaled fixed format or fixed exponent format. You can also convert data to binary and hexadecimal bases.

If you're a machine-code programmer, then dreams of multi-tasking and creating your own job files on the QL can be fulfilled with **Supertoolkit II**. The ability to set job identity tags and timing priorities has been brought through to SuperBasic. You can also delete background jobs — not SuperBasic — change their priorities or even freeze them without being a genius at machine code.

The manual provides a very simple overview of the QDOS operating system, but it is just enough to allow you to experiment with QDOS priorities. You may even learn something about how QDOS and user-jobs interact.

Supertoolkit II contains elements for everyone. For the machine code programmer the bugs in QDOS have been corrected, and you have easier access to the operating system than if you were using an assembler.

The SuperBasic programmer has not been left out either. You have a full screen editor and the ability to use flexible datafiles. There is also a host of error trapping routines which will allow you to keep control of your program when a SuperBasic error occurs.

The big advantage of the toolkit is that it's on Rom and is available on power-up. It becomes part of your system as soon as you plug it in and you can forget it's there while you do your programming.

Unfortunately, the same cannot be said of the manual. It is barely sufficient and covers the more esoteric commands in the minimum of detail. If you're a beginner it won't teach you about QDOS but it'll give you enough information to use the full screen editor and SuperBasic extensions. Machine-code programmers, however, will find no difficulty with the manual if they know QDOS.

Despite the faults of the manual, which suffers from being written by a programmer who is too close to the toolkit, the package is an impressive addition to the Tony Tebby collection on the QL.

It is a tour-de-force of good systems management which outclasses all other such packages on the QL market.

Publisher Care Electronics, Unit 14, Peerglow Industrial Estate, Old's Approach, Tolpits Lane, Watford, Herts WD1 8SR.
Price £24.95
Programmer Tony Tebby
★★★★★

Cad Pak

Not another graphics package for the QL! Won't people be satisfied with GraphiQL, **from Talent?**

Apparently not. Cad Pak **is certainly easy to get to grips with and the straightforward icons make ploughing through the 50-page manual immediately unnecessary.**

On first impressions the package looks very conservative. Most of the screen is covered by the picture window, which is surrounded by an icon menu on the left and a keyword menu above.

The three displays below the picture window show the current pen colour, thickness, and texture, the four colours which you can use in your drawings and the 22 preset textures you can set the pen to draw.

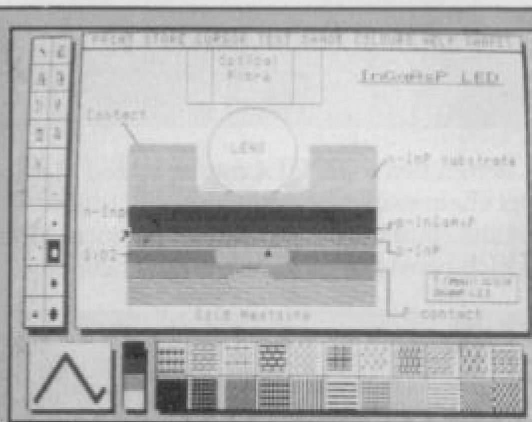
Cad Pak **performs three operations. The first and most simple produces lines of varying widths and textures and uses the cursor keys or joystick for control. The icon window on the left of the screen gives the option of 11 types of pen-width and shape. The widths range from a thin dot to a splodge which is about half the size of a penny. The pen can also be shaped to draw two of five parallel lines as it moves across the screen. A special pen shape produces a line of 'ball bearing' type marks in the wake of the nib.**

The 22 texture types can be incorporated into the pen's ink. They include a block of ball bearings, a brick wall and a chess board. All can be reproduced in any of the Cad Pak's **four colours and in a variety of widths which range from two halves of character to four characters in height and width.**

You can print messages directly in to the screen in sizes from tiny to huge, and three colours — four if you count white.

Shape creation is mainly controlled from the keyword menu and you can produce shapes with any number of sides from a single line base. You can fill the figures with colour or have them as line drawings.

The base of a shape is fixed by pressing the select key on the keyboard or joystick. A marker, in the shape of an anchor, appears and the cursor is freed to select the other boundary of the shape. Shape drawing, particularly when *Fill* is involved,



is almost instantaneous but the *Fill* routine cannot be used to put textures into shapes — shameful.

Sections of your drawings can be cut out and moved to other parts of the screen. You create a shaded window over the selected image, press the fire button and the image is lifted from the screen. Reposition the cursor at the boundary of the new location and again press the fire key. The image will be copied almost immediately.

When you're editing pictures you can store them on the microdrive or disc and the results can be output to most Epson compatible dot-matrix printers. The package includes a printer profile program in which you can set the baud rate. When printing takes place the screen is inversed and the machine locks up — no multi-tasking here I'm afraid.

The one feature which Cad Pak **is missing — compared with other QL graphics packages — is an option to design your own textures.** Cad Pak **is suitable for beginners and those export design package users who are not snobbish enough to think that ease of use is below their dignity.**

Datalink is a newish company and this package, together with its game — 3D Slime **— puts it well on the way to achieving fame and fortune.**

There is now a viable alternative to the Talent graphics packages.

Publisher Datalink Systems, Glangors, Ynslas, Borth, Dyfed SY24 5JU
Price £14.95
Joystick
★★★★★

MAIL ORDER ADVERTISING

British Code of Advertising Practice

Advertisements in this publication are required to conform to the British Code of Advertising Practice. In respect of mail order advertisements where money is paid in advance, the code requires advertisers to fulfil orders within 28 days, unless as longer delivery period is stated. Where goods are returned undamaged within seven days, the purchaser's money must be refunded. Please retain proof of postage/despatch, as this may be needed.

Mail Order Protection Scheme

If you order goods from Mail Order advertisements in ths magazine and pay by post in advance of delivery, *Sinclair User* will consider you for compensaton if the Advertiser should become insolvent or bankrupt, provided:

(1) You have not received the goods or had your money returned; and

(2) You write to the Publisher of *Sinclair User* summarising the situation not earlier than 28 days from the day you sent your order and not later than two months from that day.

Please do not wait until the last moment to inform us. When you write, we will tell you how to make your claim and what evidence of payment is required.

We guarantee to meet claims from readers made in accordance with the above procedure as soon as possible after the Advertiser has been declared bankrupt or insolvent up to a limit of £10,000 per annum in respect of all insolvent Advertisers. Claims may be paid for higher amounts, or when the above procedure has not been complied with at the discretion of *Sinclair User*, but we do not guarantee to do so in view of the need to set some limit to this commitment and to learn quickly of readers' difficulties.

This guarantee covers only advance payment sent in direct response to an advertisement in this magazine (not, for example, payment made in response to catalogues etc, received as a result of answering such advertisements). Classified advertisements are excluded.

Adventure Builder II

In this second part Tom Frost completes the demo adventure program and explains how to transform storylines into data

Here's the second instalment of the **Adventure Builder System** we started last month. Two listings this time. Listing 5 is the remainder of the demonstration adventure and Listing 6 is the basic core program on which to hang your own data lines when creating your own adventure.

Finishing the demo

To complete the demonstration adventure from last month load Tape B and add the lines from Line 1100 to 3315 in Listing 5. Save the completed demo adventure, after the loader, by typing *Goto* 9990.

Text analyser routine

The text analysis system allows a maximum input of 30 characters as upper case letters or numbers.

The analyser routine examines the input and returns to Basic with an allocated number for 'Verb' (*vb*) and 'Noun' (*no*) which the Basic program can understand. Any unrecognised word returns a value of 200 for 'Verb' and 201 for 'Noun'. This information can be used in various ways by the Basic program but in the demonstration adventure, either situation produces the response of "You can't do that".

Possible single-word inputs require some explanation. The text analysis routine — the parser — looks at the input by considering the first word as the verb and the last word as the noun so that 'DROP THE SPADE' or 'DROP THE SHORT SPADE' produces the same response as 'DROP SPADE'.

However, a one-word input, for example, 'LOOK' gives both a verb and noun of 'LOOK' with values of *vb*=4 and *no*=201. This would produce a response of "You can't do that" due to *no*=201, but such an outcome is prevented by including Look in the list of nouns and assigning it a default value of 99.

Any additional verbs which could be used as single-word inputs should be included in both lists in a similar way. Alternatively, the noun number could be a true assigned value for use by the Basic program. In the demonstration program such an approach has been used for *Dig* where it has been assigned the same noun number as *Hole* as an input of 'DIG' implies 'DIG A HOLE'.

Control of the adventure

The adventure is controlled in the Basic program by the following:

Variable *vb* (the verb number)
Variable *no* (the noun number)
The Object Status Table
The Flag Status Table

All other controls are operated by the generated code.

a) Object Status Table
Fifty entries are available in this table and each object has at all times an entry here in the position identified by the number of the object.

For example, the status of object number *x* is found by *Peek* (*o*+*x*) and a change in status is effected by *Poke* (*o*+*x*), *y* where *y* indicates the new status.

b) Flag status table
A hundred entries are available in this table with a few being reserved for specific uses:
Flag (*f*+99) is used to control size of Inventory; and
Flag (*f*+0) contains number of current location.

The first *x* entries are reserved for use by *x* objects which change description during the course of the adventure. All other flags are available for use by the Basic program.

A flag status is determined by *Peek* (f+*x*) and a change in status is effected by *Poke* (*f*+*x*), *z* where *z* indicates the new status and *x* indicates the flag number.

As the adventure progresses the Basic program will update the values in the object and flag status tables.

When any adventure begins all flags (except *f*) have the value of 0. So, in the demonstration adventure, the flags (*f*+1) and (*f*+2) are altered to the value 1 when the coat is worn and the torch is lit, respectively. Also, (*f*+3) is altered to 1 when the cupboard is open.

Completion of the basic program

1) Location descriptions
These are entered as simple *Print* statements in a maximum of 10 lines starting at Line 7000+(location number×10), with each group ending with *Return*.

2) Verb sub-routines
A hundred lines are available for each sub-routine commencing at Line 1000+(*vb*×100).

3) Printing of responses
As it is most likely that you will want a split-screen presentation, it is necessary to check for the need to scroll before each response is printed on screen. To remove the need to include such a check before each *Print* statement the responses are identified as *r*$(1), *r*$(2), *r*$(3) and *r*$(4) which are then printed by the main print routine (at Line 50).

4) Inventory and 'Here you can see'
The machine-code system performs the checking necessary to identify which objects are to be printed and the routines in the Basic program effect the printing without further need for a slow *For . . . Next* loop.

5) Variables used by the Basic program
Variables assigned in the core Basic program are: *vb*, *no*, *f*, *o*, *MAX*, *MOB*, *PBS*, *SAVE*, *LEN*, *DMOV*, *o*$(*x*,*y*) and *r*$(4,32).

Table I. Standard verbs and nouns

Verb	*vb* number	Noun	*no* number
GO	0	N	1
N	0	NORTH	1
S	0	S	2
E	0	SOUTH	2
W	0	E	3
U	0	EAST	3
D	0	W	4
GET	1	WEST	4
TAKE	1	U	5
DROP	2	UP	5
EXAMINE	3	D	6
LOOK	4	DOWN	6
L	4	LOOK	99
R	4	L	99
INVENTORY	5	R	99
I	5	INVENTORY	99
LIST	5	I	99
QUIT	6	LIST	99
STOP	6	QUIT	99
SAVE	7	STOP	99
LOAD	8	SAVE	99
		LOAD	99

Generating your own adventure

1) Type in Listing 6 and save a master copy by *Goto* 9990.
2) Load Listing 1 (code generator), add your adventure data then save on a blank tape by *Goto* 9990 (Tape A).
3) Make a copy of Listing 6, verify and do not rewind tape (Tape B).
4) Load Tape A and supply the information required by the on-screen prompts then save the two sections of data on Tape B. Make a note of the Clear number.
5) Enter as a direct command:
Clear number: Load""
and load Tape B. Stop the tape when prompted, delete Line 9949 then enter *Goto* 9950 and restart tape.
6) Delete Lines 9955 and 7010,

Table II. Object data

Number	Object (o$)	Data	Starting location
1	A tartan COAT	COAT	4
2	A small TORCH	TORCH	10
3	A wooden BOX	BOX	0
4	A short SPADE	SPADE	1
5	A bronze KEY	KEY	0
6	Splinters of WOOD	WOOD	0
7	A large DIAMOND	DIAMOND	0
8	A tartan COAT (worn)	COAT	0
9	A lit TORCH	TORCH	0

Number	Other nouns	Number	Other nouns
16	DOOR	23	GARDEN
17	CUPBOARD	24	FIELD
18	LAWN	25	SAFE
19	STAIRS	26	PATCH
20	LADDER	27	JUMP
21	GATE	28	DIG
22	HOLE		

alter Line 9991 to:
9991 Save "system" Code Save, Len.

7) Add the remainder of the Basic program (location descriptions, verb sub-routines, screen display data etc).

8) Save, by *Goto* 30, the following loader at start of a blank tape:

```
10 Clear number
20 Load""
30 Save "loader" line 10
```

9) Save the adventure, after the loader, by *Goto* 9990.

When writing your own adventure, the verbs and nouns in Table I are included automatically.

The following verb sub-routines are included in the core Basic adventure listing.

Look:	at Line 1400
Inventory:	at Line 1500
Quit:	at Line 1600
Save:	at Line 1700
Load:	at Line 1800

The *Movement* sub-routine is partially completed only, starting at Line 1000. It remains to insert any lines to account for temporary blocks such as closed doors or removal of guarding monsters.

As an example of the data for an adventure look at the demonstration program. Fig. 1, shows a map of the demo adventure, together with the organisation for the object and verb data (Tables II and III), and flag status table (Table IV).

Listing 5

```
1100 IF no>MOB THEN  LET r$(1)="
That's not possible!": GO TO 50
1105 IF PEEK (o+no)=99 THEN  LET
 r$(1)="Check your inventory!":
GO TO 50
1110 IF PEEK (o+no)<>PEEK f THEN
  LET r$(1)="You must be seeing
things!": GO TO 50
1115 IF PEEK (f+99)=MAX THEN  LE
T r$(1)="You can't carry any mor
e.": GO TO 50
1120 IF no=7 THEN  CLS : GO SUB
8800: PRINT AT 2,8;"CONGRATULATI
ONS": GO SUB 8800: PRINT AT 5,0;
"You have completed your MISSION
.": GO SUB 8800: GO TO 1602
1125 POKE (o+no),99: POKE (f+99)
,PEEK (f+99)+1: LET r$(1)="OK...
...": GO TO 50
1200 IF no>MOB THEN  LET r$(1)="
Don't be so silly!": GO TO 50
1205 IF PEEK (o+no)<>99 THEN  LE
T r$(1)="Check your INVENTORY!":
 GO TO 50
1210 IF no=9 AND PEEK f<>11 THEN
  POKE (o+9),0: POKE (o+2),PEEK
f: POKE (f+2),0: POKE (f+99),PEE
K (f+99)-1: LET r$(1)="OK.....bu
t it goes out!": GO TO 50
1215 IF no=9 THEN  POKE (o+9),0:
 POKE (o+2),PEEK f: POKE (f+2),0
: POKE (f+99),PEEK (f+99)-1: RAN
DOMIZE USR ss: PRINT "OK...But i
t goes OUT!!": GO SUB 8800: GO T
O 100
1220 IF no=8 THEN  LET r$(1)="Yo
u are still wearing it!": GO TO
50
1230 POKE (o+no),PEEK f: POKE (f
+99),PEEK (f+99)-1: LET r$(1)="O
K......": GO TO 50
1300 IF no<10 THEN  GO TO 1350
1302 IF no<>16 THEN  GO TO 1315
1305 IF (PEEK f=8 OR PEEK f=9) T
HEN  LET r$(1)="The DOOR is of s
ubstantial wood": LET r$(2)="and
 at the moment it is standing":
LET r$(3)="firmly CLOSED."
1310 IF PEEK (f+4)=1 THEN  LET r
$(3)="wide OPEN!"
1312 GO TO 50
1315 IF no<>21 THEN  GO TO 1325
1317 IF (PEEK f=14 OR PEEK f=15)
 THEN  LET r$(1)="The GATE is of
 poor quality wood": LET r$(2)="
and at the moment it is quite":
LET r$(3)="firmly CLOSED."
1320 IF PEEK (f+7)=1 THEN  LET r
$(3)="quite, OPEN."
1322 GO TO 50
1325 IF (PEEK f=15 AND (no=23 OR
 no=18) AND PEEK (f+6)=1) OR (PE
EK f=7 AND PEEK (f+5)=1 AND no=2
4) THEN  LET r$(1)="There is a H
OLE here. TAKE CARE!": GO TO 50
1330 IF ((PEEK f=15 AND (no=23 O
R no=18)) OR (PEEK f=7 AND no=24
)) THEN  LET r$(1)="It has been
well looked after": LET r$(2)="b
ut recent rain has left the": LE
T r$(3)="soil rather soft!": GO
TO 50
1335 IF no=22 AND ((PEEK f=7 AND
 PEEK (f+5)=1) OR (PEEK f=15 AND
 PEEK (f+6)=1)) THEN  LET r$(1)=
"It's quite a deep HOLE.": GO TO
 50
1340 IF PEEK f=15 AND no=26 AND
PEEK (f+6)=0 THEN  LET r$(1)="Lo
oks as though someone has": LET
r$(2)="been digging around here.
": GO TO 50
1345 LET r$(1)="Apologies from p
rogrammer!": GO TO 50
1350 IF (PEEK (o+no)<>PEEK f AND
 PEEK (o+no)<>99) THEN  GO TO 45
1355 IF no=1 OR no=8 THEN  LET r
$(1)="It is quite a smart COAT.
Looks": LET r$(2)="like a FRENCH
 tartan!!": GO TO 50
1360 IF no=2 OR no=9 THEN  LET r
$(1)="It's quite a nice little T
ORCH.": GO TO 50
1365 IF no=3 THEN  LET r$(1)="It
 looks quite STRONG.": GO TO 50
1370 IF no=7 THEN  LET r$(1)="Do
n't stand around here admiring":
 LET r$(2)="it! Pick it up and l
et's get": LET r$(3)="this farce
 finished!": GO TO 50
1375 LET r$(1)="Just what you wo
uld expect and": LET r$(2)="noth
ing more.": GO TO 50
1400 GO TO 100
1500 RANDOMIZE USR ss: PRINT TAB
 3; PAPER 2;"DHHHHHHHHHHHHHHHHHH
HHHHHE"
1501 RANDOMIZE USR ss: PRINT TAB
 3; PAPER 2; INK 6;" "; INK 7;"
 You have with you:-   "; INK 6;
" "
1502 RANDOMIZE USR 64968
1503 LET he=0
1504 FOR x=0 TO (MOB-1)
1506 IF PEEK (PBS+x)=0 THEN  LET
 x=MOB: GO TO 1512
1508 RANDOMIZE USR ss: PRINT TAB
 3; PAPER 2; INK 6;"A "; INK 7;o
$(PEEK (PBS+x)); INK 6;"G": LET
he=he+1
1510 NEXT x
1512 IF he=0 THEN  RANDOMIZE USR
 ss: PRINT TAB 3; PAPER 2; INK 6
;"A"; INK 7;" Nothing at all.
     "; INK 6;"G"
1513 RANDOMIZE USR ss: PRINT TAB
 3; PAPER 2;"CBBBBBBBBBBBBBBBBBB
BBBBBF"
1514 GO TO 195
1600 CLS
1602 PRINT AT 8,3;"Do you want t
o try again?";AT 11,12;"Y or N"
1604 INPUT a$
1606 IF a$="Y" THEN  RANDOMIZE U
SR 65058: GO TO 100
1608 IF a$="N" THEN  GO SUB 8800
: GO SUB 8800: NEW
1610 BEEP .2,20: GO TO 1600
1700 REM SAVE
1701 RANDOMIZE USR 65034
1702 CLS
1704 PRINT AT 5,1;"For temporary
 SAVE enter ""B"""
1706 PRINT AT 8,1;"For SAVE to t
ape enter any           other l
etter."
1708 INPUT a$
1710 IF a$="B" THEN  GO TO 100
1711 IF LEN a$<>1 THEN  GO TO 17
02
1712 SAVE "DATA"CODE 64130,150
1714 GO TO 100
1800 REM LOAD
1801 CLS
1802 PRINT AT 5,1;"For LOAD from
 temporary SAVE             then
enter ""B"""
1804 PRINT AT 8,1;"For LOAD from
 TAPE enter any            other
 letter."
1806 INPUT a$
1808 IF a$="B" THEN  GO TO 1814
1810 PRINT AT 12,1;"Insert DATA
tape and press PLAY"
1811 INK 0
1812 LOAD "DATA"CODE 64130,150
1813 INK 6
1814 IF PEEK 64130=0 THEN  PRINT
 AT 12,2;"No SAVE has been perfo
rmed,";AT 14,2;"so there is no D
ATA to LOAD!": BEEP .5,15: PAUSE
 150: GO TO 100
1815 RANDOMIZE USR 65046
1816 GO TO 100
1915 IF PEEK f=9 AND no=17 AND P
EEK (f+3)=0 AND PEEK (f+11)=0 TH
EN  POKE (f+3),1: POKE (f+11),1:
 LET r$(1)="As you open it you h
ear a quiet": LET r$(2)="voice f
rom the depths of the": LET r$(3
)="cupboard saying ""TOSS a BOX
from": LET r$(4)="a LOFT to end
THIS absurdity""": GO TO 50
1917 IF PEEK f=9 AND no=17 AND P
EEK (f+3)=1 THEN  LET r$(1)="Com
e on NOW! Pay attention.": LET r
$(2)="It's ALREADY open!!": GO T
O 50
1920 IF PEEK f=9 AND no=17 AND P
EEK (f+3)=0 THEN  POKE (f+3),1:
LET r$(1)="OK.......but.....SILE
NCE now!": GO TO 50
1925 IF no=3 AND (PEEK (o+3)=99
OR PEEK (o+3)=PEEK f) THEN  LET
r$(1)="It resists all your effor
ts to": LET r$(2)="open it!": GO
 TO 50
1930 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=0 THEN  LET r$(1)="It
's not QUITE as easy as THAT!":
GO TO 50
1935 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=1 THEN  LET r$(1)="It
's already open!": GO TO 50
1940 GO TO 45
2000 IF ((PEEK f=8 OR PEEK f=9)
AND no=16) OR ((PEEK f=14 OR PEE
K f=15) AND no=21) THEN  LET r$(
1)="But it is not locked!": GO T
O 50
2005 IF ((PEEK f=8 OR PEEK f=9)
AND no=16 AND PEEK (f+4)=1) OR (
(PEEK f=14 OR PEEK f=15) AND no=
21 AND PEEK (f+7)=1) THEN  LET r
$(1)="But, it is already open!":
 GO TO 50
2010 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=0 AND PEEK (o+5)=99 A
ND PEEK (f+9)=0 THEN  POKE (f+8)
,1: POKE (f+9),1: POKE (o+3),11:
 LET r$(1)="The SAFE opens and i
nside you": LET r$(2)="see a woo
den BOX.": GO TO 50
2015 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=1 THEN  LET r$(1)="It
's not locked now!": GO TO 50
2020 IF PEEK f=11 AND no=25 AND
```

Fig. 1. The demonstration adventure

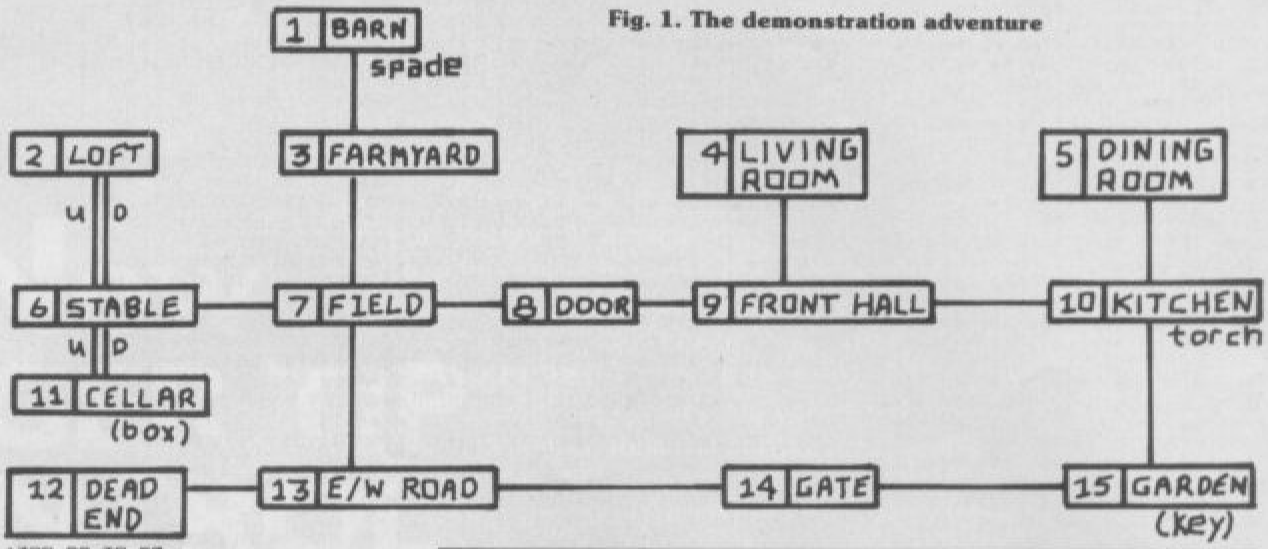


Table III. Verb data in demo program

vb number	Verb	Location	Movement data N	S	W	E	U	D
9	OPEN	1	0	3	0	0	0	0
10	UNLOCK	2	0	0	0	0	0	6
11	DIG	3	1	7	0	0	0	0
12	LIGHT	4	0	9	5	0	0	0
13	EXTINGUISH	5	0	10	0	4	0	0
14	CLIMB	6	0	0	7	0	2	11
15	DESCEND	7	3	13	8	6	0	0
16	CLOSE	8	0	0	9	7	0	0
17	TOSS	9	4	0	10	7	0	0
18	FILL	10	5	15	0	9	0	0
19	LOCK	11	0	0	0	0	6	0
20	WEAR	12	0	0	13	0	0	0
21	REMOVE	13	7	0	14	12	0	0
14	ASCEND	14	0	0	15	13	0	0
16	SHUT	15	10	0	0	14	0	0
22	JUMP							
23	USE							

Table IV. Flag Status Table: Assigned Values

Flag Number	Action for Value=1
1	COAT worn (fixed allocation)
2	TORCH lit (fixed allocation)
3	CUPBOARD open
4	DOOR open
5	HOLE in field
6	HOLE in garden
7	GATE open
8	SAFE unlocked
9	Found BOX
10	Found KEY
11	First OPEN CUPBOARD
99	INVENTORY (fixed allocation)

```
PEEK (f+8)=0 AND PEEK (o+5)<>99
THEN  LET r$(1)="You'll need a k
ey to do THAT!": GO TO 50
2030 IF no=3 AND (PEEK (o+3)=PEE
K f OR PEEK (o+3)=99) AND PEEK (
o+5)=99 THEN  LET r$(1)="No key
will open THIS box!": GO TO 50
2035 GO TO 45
2100 IF (PEEK f<>7 AND PEEK f<>1
5) THEN  LET r$(1)="You can't DI
G here!": GO TO 50
2105 IF (((PEEK f=15 AND (no=23
OR no=18 OR no=22 OR no=26 OR no
=28)) OR (PEEK f=7 AND (no=24 OR
 no=22))) AND PEEK (o+4)<>99) TH
EN  LET r$(1)="Now just how are
you going to": LET r$(2)="manage
 to do THAT, without a": LET r$(
3)="suitable tool!": GO TO 50
2110 IF PEEK f=15 AND PEEK (f+10
)=0 AND (no=18 OR no=22 OR no=23
 OR no=26 OR no=28) THEN  POKE (
f+10),1: POKE (o+5),15: POKE (f+
6),1: LET r$(1)="WOW!  You dig a
 HOLE in the": LET r$(2)="beauti
ful lawn and your SPADE": LET r$
(3)="throws up a KEY on to the g
rass.": GO TO 50
2115 IF ((PEEK f=15 AND PEEK (f+
6)=1) OR (PEEK f=7 AND PEEK (f+5
)=1)) THEN  LET r$(1)="Surely no
t AGAIN!": GO TO 50
2120 IF PEEK f=15 AND PEEK (f+6)
=0 AND PEEK (o+4)=99 AND (no=28
OR no=23 OR no=22 OR no=18 OR no
=26) THEN  POKE (f+6),1: LET r$(
1)="OK..........You dig a HOLE!"
: GO TO 50
2125 IF PEEK f=7 AND PEEK (f+5)=
0 AND PEEK (o+4)=99 AND (no=28 O
R no=24 OR no=22) THEN  POKE (f+
5),1: LET r$(1)="OK..........You
 dig a HOLE!": GO TO 50
2130 GO TO 45
2200 IF PEEK (o+9)=99 AND no=9 T
HEN  LET r$(1)="It's already lit
!": GO TO 50
2205 IF no=2 AND PEEK (o+2)=99 A
ND PEEK f<>11 THEN  POKE (o+2),0
: POKE (o+9),99: POKE (f+2),1: L
ET r$(1)="OK.........TORCH now l
it": GO TO 50
2210 IF no=2 AND PEEK (o+2)=99 T
HEN  POKE (o+2),0: POKE (o+9),99
: POKE (f+2),1: GO TO 100
2215 GO TO 45
2300 IF PEEK (o+2)=99 AND no=9 T
HEN  LET r$(1)="It's not on!": G
O TO 50
2305 IF no=9 AND PEEK (o+9)=99 A
ND PEEK f<>11 THEN  POKE (o+9),0
: POKE (o+2),99: POKE (f+2),0: L
ET r$(1)="OK........Torch now of
f.": GO TO 50
2310 IF no=9 AND PEEK (o+9)=99 T
HEN  POKE (o+9),0: POKE (o+2),99
: POKE (f+2),0: GO TO 100
2315 GO TO 45
2400 IF PEEK f=11 AND (no=19 OR
no=14) THEN  POKE 64280,6: GO TO
 100
2405 IF PEEK f=6 AND (no=20 OR n
o=14) THEN  POKE 64280,2: GO TO
100
2410 IF PEEK f=2 AND no=15 THEN
 POKE 64280,6: GO TO 100
2412 IF PEEK f=6 AND no=15 THEN
 POKE 64280,11: GO TO 100
2415 IF (PEEK f=14 OR PEEK f=15)
 AND PEEK (f+7)=0 THEN  LET r$(1
)="Surely opening the gate would
 be": LET r$(2)="much more sensi
ble!": GO TO 50
2420 IF (PEEK f=14 OR PEEK f=15)
 AND PEEK (f+7)=1 THEN  LET r$(1
)="Why?.....As it is OPEN surely
": LET r$(2)="there is no need f
or that.": GO TO 50
2425 GO TO 45
2500 IF PEEK f=2 AND (no=20 OR n
o=15) THEN  POKE 64280,6: GO TO
100
2505 IF PEEK f=6 AND (no=19 OR n
o=15) THEN  POKE 64280,11: GO TO
 100
2510 GO TO 45
2600 IF (PEEK f=8 OR PEEK f=9) A
ND no=16 AND PEEK (f+4)=1 THEN
POKE (f+4),0: LET r$(1)="OK.....
...DOOR now closed.": GO TO 50
2605 IF (PEEK f=14 OR PEEK f=15)
 AND no=21 AND PEEK (f+7)=1 THEN
  POKE (f+7),0: LET r$(1)="OK...
.....GATE now closed.": GO TO 50
2610 IF PEEK f=9 AND no=17 AND P
EEK (f+3)=1 THEN  POKE (f+3),0:
LET r$(1)="OK............": GO T
O 50
2615 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=1 THEN  LET r$(1)="Th
e door seems to have stuck!": GO
 TO 50
2620 GO TO 45
2700 IF PEEK f=2 AND no=3 AND PE
EK (o+3)=99 AND PEEK (f+11)=1 TH
EN  POKE (o+7),6: POKE (o+6),6:
POKE (o+3),0: POKE (f+99),PEEK (
f+99)-1: LET r$(1)="You TOSS the
 BOX from the loft": LET r$(2)="
and it breaks as it lands on the
": LET r$(3)="STABLE floor.": LE
T r$(4)="Something falls out!":
GO TO 50
2705 IF PEEK f=2 AND no=3 AND PE
EK (o+3)=99 THEN  LET r$(1)="Sha
n't do that! No I WON'T cos'": L
ET r$(2)="there IS still somethi
ng to be": LET r$(3)="said for C
UPBOARD love!": GO TO 50
2710 GO TO 1200
2800 IF ((PEEK f=15 AND PEEK (f+
6)=1) OR (PEEK f=7 AND PEEK (f+5
)=1)) AND PEEK (o+4)<>99 AND no=
22 THEN  LET r$(1)="Now just how
 are you going to": LET r$(2)="m
anage to do THAT, without a": LE
T r$(3)="suitable tool!": GO TO
50
2802 IF ((PEEK f=15 AND PEEK (f+
6)=0) OR (PEEK f=7 AND PEEK (f+5
)=0)) AND no=22 THEN  LET r$(1)=
"Now just WHAT hole would that b
e": GO TO 50
2805 IF PEEK f=7 AND no=22 AND P
EEK (o+4)=99 AND PEEK (f+5)=1 TH
EN  POKE (f+5),0: LET r$(1)="OK.
..You fill in the HOLE.": GO TO
50
2810 IF PEEK f=15 AND no=22 AND
PEEK (o+4)=99 AND PEEK (f+6)=1 T
HEN  POKE (f+6),0: LET r$(1)="OK
...You fill in the HOLE and": LE
T r$(2)="you leave an ugly looki
ng PATCH": LET r$(3)="on the law
n!": GO TO 50
2815 GO TO 45
2900 IF PEEK f=11 AND no=25 AND
PEEK (f+8)=1 THEN  LET r$(1)="Th
e door seems to be jammed.": GO
TO 50
2905 GO TO 45
3000 IF no=1 AND PEEK (o+1)=99 T
HEN  POKE (o+1),0: POKE (o+8),99
: POKE (f+1),1: LET r$(1)="VERY
becoming!": LET r$(2)="  ": LET
r$(3)="But becoming what?": GO T
O 50
3005 IF no=8 THEN  LET r$(1)="Yo
u ARE wearing it!": GO TO 50
3010 GO TO 45
3100 IF no=8 THEN  POKE (o+1),99
: POKE (o+8),0: POKE (f+1),0: LE
T r$(1)="OK.......but why?": LET
 r$(2)="Weren't you becoming qui
te": LET r$(3)="attached to it!"
: GO TO 50
3105 IF no=1 THEN  LET r$(1)="BU
T you are NOT wearing it!": GO T
O 50
3110 GO TO 45
3200 IF PEEK f=2 AND (no=22 OR n
o=27) THEN  POKE f,6: FOR x=-5 T
O 15: BEEP .04,x: NEXT x: FOR x=
14 TO -5 STEP -1: BEEP .08,x: NE
XT x: BEEP 1.0,-6: GO TO 100
3205 IF (no=27 OR no=6 OR no=5)
THEN  LET r$(1)="OK......but not
hing happens!": GO TO 50
3210 GO TO 45
3300 IF no<10 AND PEEK (o+no)<>9
9 THEN  LET r$(1)="Check your IN
VENTORY!": GO TO 50
3305 IF no=5 AND PEEK (f+8)=0 TH
EN  LET r$(1)="Now just exactly
how should I": LET r$(2)="USE th
is KEY!": GO TO 50
3310 IF no=4 THEN  LET r$(1)="Co
me on now- surely you know": LET
 r$(2)="the correct word to use
with": LET r$(3)="a SPADE!": GO
TO 50
3315 LET r$(1)="How about giving
 just a little": LET r$(2)="more
 detail please!": GO TO 50
```

Listing 6

```
1706 PRINT AT 8,1;"For permanent
 SAVE enter any            other
 letter."
1708 INPUT a$
1710 IF a$="B" THEN  GO TO 100
1711 IF LEN a$<>1 THEN  GO TO 17
02
1712 SAVE "DATA"CODE 64130,150
1714 GO TO 100
1800 REM LOAD
1801 CLS
1802 PRINT AT 5,1;"For LOAD from
 temporary SAVE             then
enter ""B"""
1804 PRINT AT 8,1;"For LOAD from
 TAPE enter any             other
 letter."
1806 INPUT a$
1808 IF a$="B" THEN  GO TO 1814
1810 PRINT AT 12,1;"Insert DATA
tape and press PLAY"
1811 INK 7
1812 LOAD "DATA"CODE 64130,150
1813 INK 1
1814 IF PEEK 64130=0 THEN  PRINT
 AT 16,1;"No SAVE has been perfo
rmed yet!": BEEP .5,15: PAUSE 15
0: GO TO 100
1815 RANDOMIZE USR 65046
1816 GO TO 100
7000 REM LOCATION DESCRIPTIONS
7010 LIST
9949 CLS : PRINT AT 8,8;"Stop th
e tape": STOP
9950 LOAD ""CODE
9955 LOAD "OBJECTS" DATA o$()
9960 LET MAX=PEEK 64118: LET MOB
=PEEK 64119: LET f=64280: LET o=
64379: LET ss=64440
9961 POKE 64130,0
9965 DIM r$(4,32)
9970 FOR x=1 TO 4: LET r$(x,1)="
*": NEXT x
9975 LET PBS=256*PEEK 64123+PEEK
 64122: LET SAVE=256*PEEK 64117+
PEEK 64116: LET LEN=256*PEEK 641
21+PEEK 64120
9976 LET DMOV=256*PEEK 64125+PEE
K 64124
9980 RANDOMIZE USR 65058
9985 GO TO 100
9990 SAVE "ADVENTURE" LINE 9940
9991 STOP
```

```
  49 REM PRINT RESPONSE
  50 FOR x=1 TO 4
  52 IF r$(x,1)="*" THEN  LET x=
5: GO TO 195
  54 RANDOMIZE USR ss: PRINT r$(
x): LET r$(x)="*"
  56 NEXT x
  58 GO TO 195
  99 REM PRINT LOCN DESCRIPTION
 100 BORDER 7: PAPER 7: INK 1: C
LS
 102 GO SUB 7000+PEEK f*10
 105 RANDOMIZE USR 64930: PRINT
 110 PRINT "Here you can see:-"
 115 LET he=0
 120 FOR x=0 TO (MOB-1)
 122 IF PEEK (PBS+x)=0 THEN  LET
 x=MOB: GO TO 128
 124 RANDOMIZE USR ss: PRINT o$(
PEEK (PBS+x)): LET he=he+1
 126 NEXT x
 128 IF he=0 THEN  PRINT "Nothin
g at all."
 130 REM SPECIAL CONDITIONS
 194 REM INPUT AND ANALYSIS
 195 RANDOMIZE USR ss: PRINT "Wh
at next?"
 196 BEEP .1,20
 200 RANDOMIZE USR 64459: PRINT
 202 LET vb=PEEK 64114
 204 LET no=PEEK 64115
 206 REM ANY SPECIALS?
 228 IF vb=200 OR no=201 THEN  L
ET r$(1)="You can't do that.": G
O TO 50
 230 REM GOTO vb SUBROUTINE
 235 GO TO 1000+vb*100
1000 REM Movement
1002 LET no=no-MOB: POKE 64115,n
o
1004 REM ANY OBSTACLES?
1090 RANDOMIZE USR 65005
1092 IF PEEK 64115=0 THEN  LET r
$(1)="You can't go that way.": G
O TO 50
1093 POKE 64280,PEEK 64415
1094 GO TO 100
1400 GO TO 100
1500 RANDOMIZE USR ss: PRINT "Yo
u have with you:-"
1501 RANDOMIZE USR 64930
1502 LET he=0
1504 FOR x=0 TO (MOB-1)
1506 IF PEEK (PBS+x)=0 THEN  LET
 x=MOB: GO TO 1512
1508 RANDOMIZE USR ss: PRINT o$(
PEEK (PBS+x)): LET he=he+1
1510 NEXT x
1512 IF he=0 THEN  LET r$(1)="No
thing at all!": GO TO 50
1514 GO TO 195
1600 CLS
1602 PRINT AT 8,3;"Do you want t
o try again?";AT 11,12;"Y or N"
1604 INPUT a$
1606 IF a$="Y" THEN  RANDOMIZE U
SR 65058: GO TO 100
1608 IF a$="N" THEN  STOP
1610 BEEP .2,20: GO TO 1600
1700 REM SAVE
1701 RANDOMIZE USR 65034
1702 CLS.
1704 PRINT AT 5,1;"For temporary
 SAVE enter ""B"""
```

Response time and memory

1) Variables

When memory becomes a problem the first coniderationis usually to replace frequently used numbers with a variable. For example 0 and 1 abound in many Basic adventure listings and the use of:

LET n=0 and LET j=1

followed by the replacement in the listing of each aof these numbers by n or j can effect a considerable saving of memory. Such an approach can, when applied to extremes, have an adverse effect on the response time.

2) Sub-routine structure

a) The *Examine* sub-routine

This is likely to be one of the longest in terms of number of lines but acceptable response times can be achieved by dividing the sub-routine into several sections. A line such as Line 1300 in the demonstation program effectively produces two shorter *Examine* sub-routines, each of which could be further subdivided if necessary.

b) the *Movement* sub-routine

This routine requires almost instant response but can be slowed down if there are many considerations of locked doors etc to be evaluated by the Basic program. This does not apply to the demonstration program as there are only two such lines. Removal of such lines can be achieved with the following modifications.

On return from *Randomize Usr* 65005 the maximum value of *Peek* 64115 will be the number of locations in the adventure (in this case, 15). Also, if the door is closed then that response is required for an east movement from Location 8 and a west movement from Location 9. Currently, in the movement data, east from Location 8 has a value of 9 and west from Location 9 has a value of 7. Change both of these values to 16 in the Data lines of the code generator program, or as a short-cut the changes can be effected by the direct commands:

Poke ((DMOV−7)+59),16
Poke ((DMOV−7)+67),16

Now make the following alterations to the Basic listing:

1) Remove Lines 1005, 1606, 1816, 7080, 7081.

2) Add the following lines:

1820 IF PEEK((f + 4) = 1 THEN POKE ((DMOV−7) + 59),9: POKE ((DMOV−7) + 67),7
1825 GOTO 100
1606 IF a$ = "Y" THEN GOTO 1620
1620 POKE ((DMOV−7) + 59),16: POKE ((DMOV−7) + 67),16
1629 RANDOMIZE USR 65058
1630 GOTO 100

Renumber 1090 as 1050 then delete 1050

Renumber 1092 as 1052 then delete 1052

1055 IF PEEK 64115<16 THEN GOTO 1060
1058 LET r$(1) = n$(PEEK 64115−15): GOTO 50
9972 DIM n$(2,9)
9973 LET n$(1) = "The DOOR is closed!"
9974 LET n$(2) = "The GATE is closed!"

3) Alter the following lines:

1900 after POKE (f+ 4),1: add POKE ((DMOV−7) + 59),9: POKE ((DMOV−2) + 67),7
2600 after POKE (f+4),1: add POKE ((DMOV−7) + 59),16: POKE ((DMOV−7) + 67),16



GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK · GRIP STICK
Now FINGER TIP CONTROL IS WITHIN YOUR GRASP.
A totally new design gives instant response to your command movements.
Up to now Joysticks of the Speedking quality are priced at £20 and over. The Speedking is microswitch based, and costs only £12.OO, £14.99 for BBC, C16 & Dragon machines.
Designed to fit your hand, not the table top, meaning comfort during the longest of games.
GUARANTEED for Twelve Months.
Available for Spectrum 48K and Plus Commodore 64, 128 and Vic 20 Atari, Electron, Amstrad, BBC and Dragon machines.
Available in left and right handed models.
konix
SPEEDKING
A Major Breakthrough in Joystick Design
ONLY £12.99
Trade and export enquiries contact Wynford or Sandra on (049) 525 5913
Konix Computer Products is a trading name of Creative Devices Research Ltd
Please send me ...... Speedking(s) at £12.99 each
Dept SU7
Right handers please order .... right handed model
Computer make .... left handed
I enclose cheque/postal order payable to KONIX
Please charge my Access/Visa ____
Card holders can call (0495) 711988 to order
Signature ____
Name: ____
Address: ____
____ Postcode ____ Tel: ____
Send to Konix Computer Products Unit 13 Sirhowy Ind Est Tredegar Gwent NP2 4QZ



More news on Dark Sceptre, **Beyonds new mega-game due for release in July for £9.95. The idea is to gather together a loyal team and wrest the Dark Sceptre from the shadow Lords, weakening their power.**

There are eight character types inhabiting the land each individual has his own personality and care should be taken when recruiting your team. The character types in a team dictate the game play. For instance, a team full of huntsmen would storm through the land laying waste everything in its path, while a team with a number of mystics would try to peruade other characters to do things by magic.

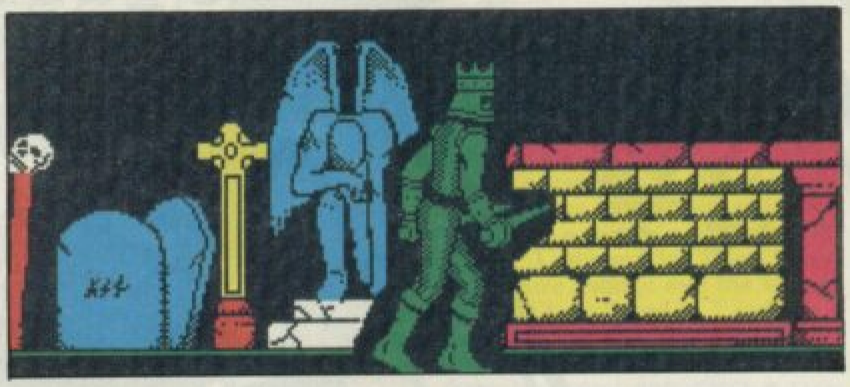
The helmets the characters wear show their type and the colours denote the teams

Dark Scepte **is also to be run as a play-by-mail (PBM) game and all the players will be divided into the eight teams.**

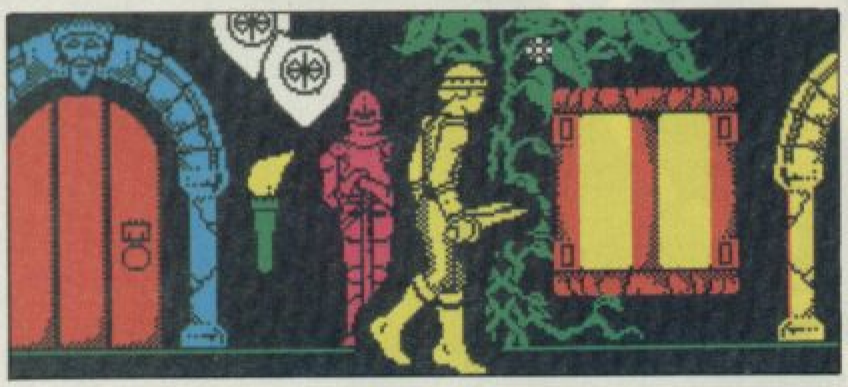
The computer game will contain around 4,000 screens yet the play-by-mail version holds hundreds of thousands of screens. More about the PBM version next month.



◀ **The Huntsman is a member of the Assassins' Guild. He's a hunter-killer and travels stealthily through the land putting other characters out of their misery. You may find the Huntsman useful but so may other Commanders. He's a mean fighter. The Huntsman can enter a house, and there he may find objects which could either help or hinder him and possibly other characters.**



The Thane is the commander, or king, of your team and his is the job of recruitment. If you lose the Thane, the remaining members of your team lose their loyalty and desert. Team members are continuously lost en route, whether through death, desertion, or from recruiting drives by opposing teams. Thus the king is a key unifying force. ▶



◀ **The Fool is your ambassador and a smooth talker into the bargain. Trust him to make alliance on your behalf and to help in recruiting new team members. The Fool is an adept swordsman but fights best with his tongue.**

● **The Reaper is a member of the Executioners' Guild and a nasty piece of work if you get into a fight with him.** ▼



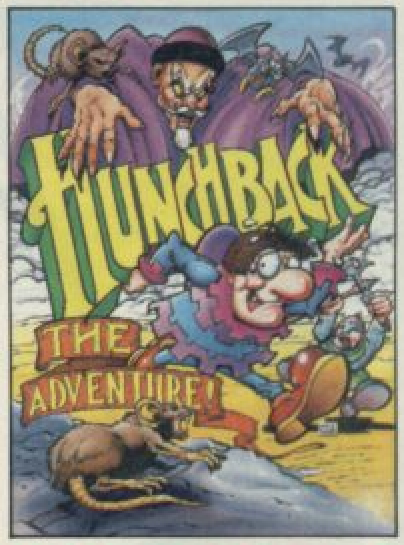
CAULDRON II

Turn the tables. It's time for the humble pumpkin to fulfil its heroic vegetable destiny. Palace Software's ***Cauldron II: The Pumpkin Strikes Back*** *gives us pumpkin as hero and will be released towards the end of July for £8.99.*

Remember ***Cauldron?*** *How you played the part of a wimpy witch who had to find the Golden Broomstick and defeat the Evil Pumpkin. Well you helped her find it alright and now she's grown in malevolent power. She practises her evil from a vast fortress — a strangely familiar fortress if you map it out.*

Now you, a long pumpkin and the last of the pumpkin race, must defeat her if pumpkingom is to survive. Being limbless your mode of movement is bizarre but really cute. You bounce with three jump heights to help you leap out of trouble.

There are over 128 screens to explore filled with assorted nasties — watch out for the mice, they may be small but they're deadly. Also generally unpleasant are bats, spiders and skeletons. To complete the adventure youmust end the



HUNCH IS BACK

Hunchback the Adventure **is Ocean's next release and you can expect to see this humorous graphics and text adventure in July for £7.95.**

You play the love-lorn Quasimodo again searching for Esmerelda. The game starts off at Chez Quasi and goes down hill — into the sewers, in fact, the subterranean tunnels that lead to the Cardinal's palace.

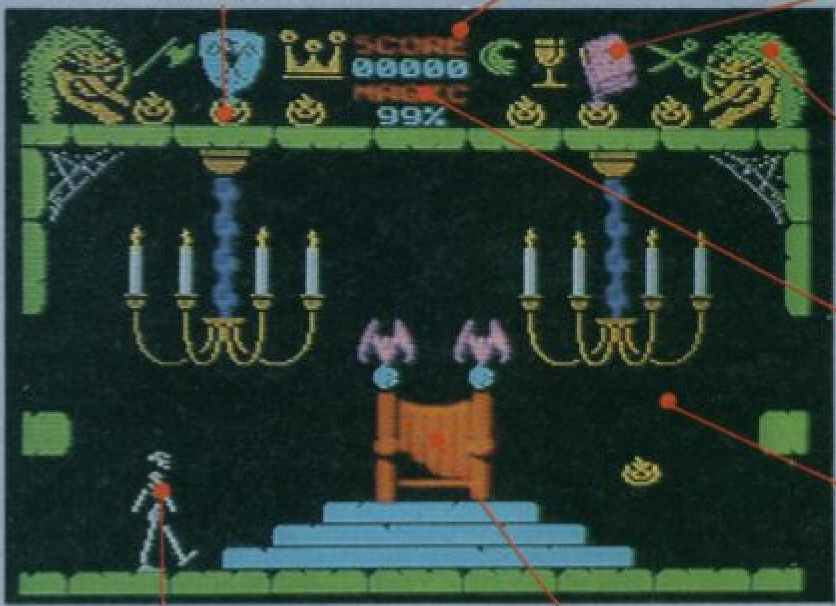
On the way pop into the bakery or the jewellers and collect useful objects.

There are the usual assortment of nasties to battle with, and teasers to solve until eventually you'll end up at the Cardinal's palace where lie devils to torment you and Esmerelda's prison. To free her, defeat the devils, steal the keys and climb into the belfry.

THE pumpkins represent your six lives though they disappear one by one as you get killed off.

YOUR high score is shown here.

WELL done. You've collected all magic objects — the axe, shield and the crown, the book of spells, the lock of hair and the goblet, and the scissors.



AT either corner is the evil, gnarled face of the witch. Watch her cackle merrily as you die horribly yet again.

YOU have 99 per cent of magic for each of your six live. The counter decreases each time you touch a nasty.

HERE you are bouncing merrily along. Push the joystick forward and you'll exit the screen.

BEWARE the guardian skeleton — he's more than just a bag of bones.

YOU are in the middle of the castle in the throne room. This is where you'll find the crown.



witch's power by cutting off a lock of her hair and dropping it into the cauldron (while holding the book of spells.) Simple eh?

To get that far, you must collect six objects. The goblet is handy in the control room; the axe opens new avenues; the shield gives protetion from a load of old bones; the crown keepsthe wearer alive; the scissors are useful for cutting things eg hair and the book of spells is well. . . just useful.

*These objects aside, there are lots of puzzles to solve and the graphis are well up to **Cauldron I** standard.*

SOFT PREVIEW WARE

Software Preview compiled by Clare Edgeley

MOLECULE MAN

Superb 3D graphics, enormous sprites and smooth movement — all found in Molecule Man, **Mastertronic's latest blockbuster.**

It looks like a cross between Cylu **and** Sweevo's World **with a huge 256 screens. Scattered around are 16 circuit sections which when assembled in the teleporter room allow you to escape.**

Life is not easy, barriers often surround the circuits making them inaccessible, or block off parts of the maze. This is where a bomb comes in useful, but you have to pay for it with hard cash. Pick up the money whenever you find it and then choose to spend it on bombs or life pills. Just like life, really.

On the other side of the cassette is a maze designer for Molecule Man **so you can redesign the game. It's simple to use and you can rearrange the walls of the maze, move objects round, decrease or increase their numbers — it's entirely up to you. Save it to tape and see how long it takes to solve.**

Molecule Man **is only £1.99 and it's in the shops now.**

Also from Mastertronic, in its £2.99 MAD range is Conquest **— an icon-driven adventure which looks like a hybrid of** Atic Atac **and** Dragontorc**: the former for the graphics, the latter for the 3D room layout.**

The story is pretty simple. Evict the nasties from each room of the castle to ensure that Oscar, the owner, has no more unwelcome guests. Pick up and examine objects using the icons and collect the weapons.

Conquest **is available now.**



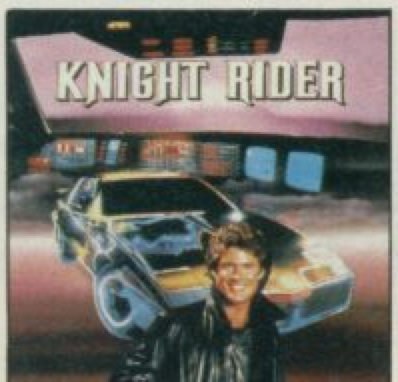
KNIGHT RIDER

After months of delay due to trouble with his computer console and big end, Knight Rider **has finally got his car on the road and is shifting into top gear.**

Based on the successful TV series, you play the hero out on yet another do-or-die mission. This time it's to combat and defeat a terrorist plot which may trigger off a third world war. Heavy stuff.

The game is in three sections. Use the map screen to choose the city in which Micael Knight, the hero, must start his search for terorrist activity. Then peering through the windscreen at the 3D vector graphics, drive to that city avoiding enemy cars and helicopters en route. Enter the terrorists' operation base and end their dastardly plot. However, the baddies may pip you to the post and prepare to launch a missile. Stop the countdown or all will be lost.

Knight Rider **should be on the streets at the end of the month, price £7.95.**





MANDRAGORE ▲

Mandragore is big. Two cassettes plus booklet, all chock full of game, map, data, sub-game options, and all the other things that make for very, very complicated role-playing adventures.

Yet again, a once peaceful land has been trampled on by an all round nasty person with a name that is difficult to pronounce — the dreaded Yarod-Nor (almost certainly an anagram for something). In order to free the land you must build up a crack team of assorted goodies who will restore overall command to someone with a more sensible name.

In true role-playing tradition you allot points to different qualities and try to build on these qualities whilst playing the game. General movement screens depict a map of the local area and, as you enter a village or are attacked by monsters, the screen changes to give you a close up of the action.

The game was originally written by French software house Infogram and is being marketed in this country by CRL who could be on to a winner. Infogram has a couple more titles on the way, also via CRL in this country. Vera Cruz **is a detective game in which you collect clues by zooming in on particular details of a murder. A cartoon graphics game called** The Inheritance **is promised for late autumn. Both the new titles are expected to retail for the ubiquitous £9.95.**

PUB GAMES

A game to help strengthen your drinking arm is the latest crazy idea from Alligata. First it released Showjumping to train all you would-be hacks(!), and now Pub Games.

This unusual compilation of seven events — the alcoholic version of Winter and Summer Games — includes skittles dominoes, bar billiards and darts.



And now you can join in, or at least get in some practise between opening hours. Pub Games looks like good fun and has the added bonus that some of the games are totally original to the computer. Football's been seen before . . . but Table Football? Bar billiards?

Yes, if you want to train your drinking arm, just drain a few jars between bouts, and then you too could have a beer gut like Eric Bristow. Sounds good.

LIVE AND LET

Bond is back. Domark's latest forage into the secret world of 007 gives you the opportunity of joining the chauvanistic lady-killer in Live and Let Die.

Unlike the arcade-based A View to a Kill, Live and Let Die is a graphic adventure which has you rushing back and forth between Harlem, New Orleans and the sunny island of San Monique in a dastardly plot of drugs dealing in which the evil Dr Kananga attempts to turn America into a land of hopeless junkies.

Apparently the game is going to follow the movie as far is is possible with the debonair James falling foul of all the nasties — Mr Big, Tee Hee and Baron Samedi, not forgetting the mastermind himself, Dr Kananga.

Domark is to release other 007 games and the next is planned to coincide with the new Bond film next summer — title still under wraps. And there are plans to create a 'Bond World' which will give a sense of continuity with the sauve places, characters and objects cropping up in future games.

Live and Let Die will be out in July costing £8.95.



KORONIS RIFT

▲

The games they said would never be converted to the Spectrum are being converted. Activision has announced the imminent release of Koronis Rift and the not quite so imminent release of Eidelon.

Both games were the original conceptions of Lucasfilms, the American software company set up by that well known purveyor of epic space battles and actors in furry suits to the masses, George Lucas.

Hard to be sure what the game will end up looking like on the Spectrum, but on the Commodore they received much acclaim.

The two programs use a technique derived from maths called Fractals to generate landscapes in 3D of great detail and variety. Koronis Rift due in July and expected to cost £7.99 has you searching the planet Koronis in your space fighter, scavenging the burnt out wrecks of dead spaceships for booty.

You also get to blast things to bits — mainly flying saucers guarding the wrecks, but if you get really good you get to take out the saucer base as well.

▼



HEARTLAND

*One of the most exciting releases this summer looks set to be **Heartland** an Odin title published by Firebird. This graphically beautiful game reveals a story of a strange land trapped in the wrong dimension. Only a lost book of spells can put things right.*

The graphics are smooth, detailed and very impressive. Dressed in a top hat with only your bed for transport, you must travel from land to land — collecting the six missing pages which make up the last chapter.



Before leaving each land, first collect a page from the spellbook hidden in that area, only then can you travel on through the 250 odd screens to the town, the mountains, the space station, the park and the other regions of Heartland.

*Movement through the game is reminiscent of **Three Weeks in Paradise** where the screens seem to be stacked one behind the other.*

***Heartland** will be on the streets at the end of this month selling at £9.95*

BOBBY BEARING

*There's been a rush over the last few months of programs like the arcade game, **Marble Madness.** First was Melbourne House with **Gyroscope**, then **Spindizzy** from Electric Dreams, and now trying to beat the competition is **Bobby Bearing** from the Edge.*

*There's a striking similarity between **Bobby Bearing** and **Spindizzy**, heightened by the fact that the maze is played in sections. Follow the arrows and you'll roll fluidly from one area to another, up and down ramps, corridors and ledges.*

There's more to the game

BOBBY rises high on a breath of warm air. Now try and guide him into the tunnel.

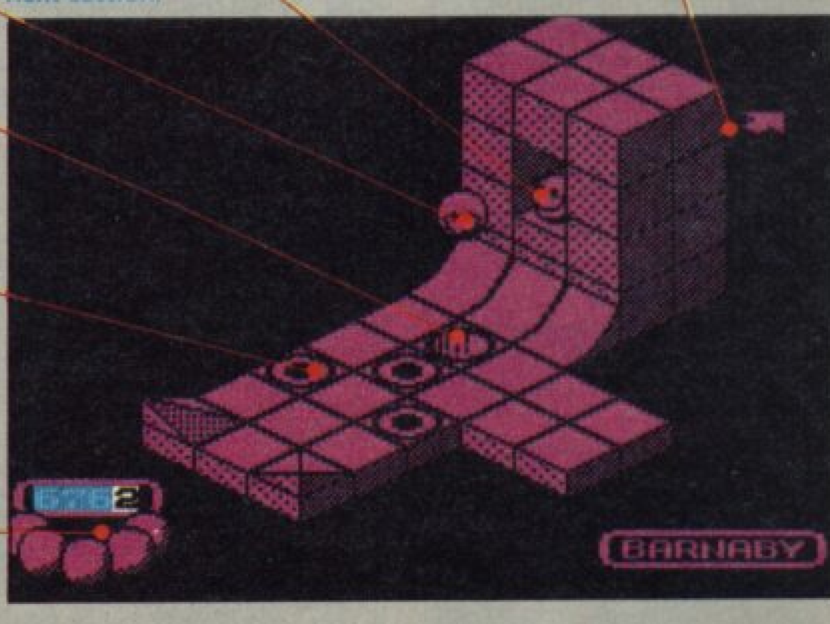
BARNABY is already in the tunnel waiting to be pushed to the next section.

FOLLOW the arrow to the next section.

THE airduct is here.

THESE three squares have to be rolled on in a certain sequence for the air duct to work. If you time it right, you'll be blown up and forward and into the tunnel.

HERE lie Bobby's four brothers and one cousin. When you guide them home to base a smiling face appears on each bearing. Should you fail, a cross scores them out. Above is a timer ticking away the seconds.



SOFT PREVIEW WARE

FIST II THE LEGEND RETURNS

Probably the most eagerly awaited title this year is Melbourne House's sequel to **Way of the Exploding Fist**, now expected in July/August.

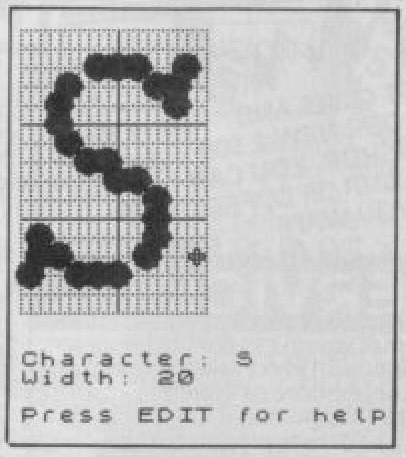
Fist II — The Legend Returns will have a stronger storyline and be a quest type venture. Melbourne isn't giving much away but there is an aim other than just knocking your opponent's brains out and though the moves are similar to those in **Exploding Fist**, the scenery, characters and figures you have to fight are different.

Some screens will impose limitations on movement, for instance, fighting in a cave with a low ceiling restricts upward movement. Similarly, fighting in a swamp and being half drowned by your opponent doesn't do much for your strength ratings.

After **Fist II** comes another game, at the time of writing so secret it has no firm title. It's been written by the authors of **Hampstead** and **Terrormolinos** and is a **Quilled** adventure with the working title of **Villains.** It's your first day out of the nick and you've got to find your old friends and pick up enough info to do another job.

Choose your mates — there are seven of them with a wide range of trades: safe cracking, a con man and a cat burgler are just three. The game runs on both sides of the cassette and a password is needed to get on to the second side where the crime is committed. The graphics are being programmed by the Melbourne House team and input is of the verb — noun variety. No release date has yet been set.

QUALITAS FONT EDITOR



*There may be other word processors but **Tasword Two** still gets all the interesting add-on packages. Seven Stars has produced **Qualitas** which, when merged into **Tasword** gives it all the facilities it lacks in terms of print format. These include five fonts plus an editor to invent your own, near letter quality print on dot matrix — (printing everything twice), equal space justification and proportional character widths.*

*If your printer is Epson RX80 compatible — the basic requirement of Qualitas — and you are using **Tasword** it rates a look.*

though than just trundling a ball bearing around. Other than the expected puzzles where you have to use moving blocks as lifts, there are traps to negotiate, and airducts to use. Sometimes you'll have to stand on squares in sequence to trigger a chain of movement. It's very clever and your timing needs to be spot on.

The object of the game, however, is to find five other ball bearings and push them home to base. They are inert and you'll have to use all your skills to roll them up and down the slopes. They're well scattered and you'll have to search through 150 screens to find them. It'll drive you round the bend. The graphics are distinguished from the other games by their curved perspective. Believe me, when Bobby, Barnaby, Bertie etc roll into a dip, they actually rock back and forth as they settle. Movement is very smooth and the game extremely difficult. Try it for yourself. It's in the shops now for £7.95.

THE BOGGIT

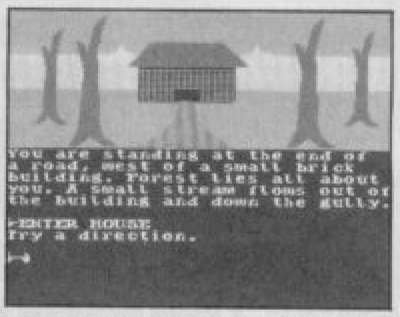
Probably all you need to know about The Boggit **is that it is written by Fergus McNeill, it's an adventure and has some sort of connection with the premier pixie prose producer, old JRR himself.**

This should tell you that it ought to be very funny, ingenious and be chock full of deft parodies not only of other pixie bashing extravaganzers but of computer games in general, national political figures and the other flotsom and jetsom of daily existence.

It may well be more successful than one rather more dead-pan Tolkienian multi-part epic I can think of. Can't wait.

Streetdate: July, Price £7.95.

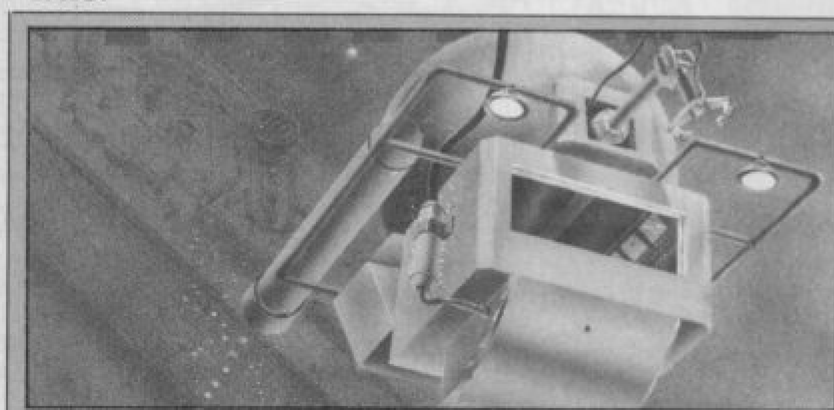




THE VERY BIG CAVE ADVENTURE

The Secret of St Brides was, I thought, a genuinely witty and well constructed adventure. Now the curious ladies from the specialist school for grown-up girls have, through CRL produced The Very Big Cave Adventure **— a delicious parody of Crowther and Woods original opus, where sharpened ZX81s replace axes and most of the problems are solved only by a keen sense of the punningly absurd.**

Most "funny" adventures aren't. First signs suggest that this one is and that dear old Fergus McNeill of Bored of the Rings **has some competition in the alternative adventures market. For those familiar in some detail with** Colossol Caves **there is an extra pleasure to be gleaned from the detail and precision of the parodies. Out about now,** The Very Big Cave Adventure **costs £7.95.**



TITANIC DREAMS

Titanic is the biggy from Electric Dreams and most certainly not to be confused with that utterly awful game based on the Titanic released a couple of years back. The task is to raise the Titanic using eight floatation bags. Finding the bags involves manoeuvring your high-tech diving craft and searching the murky, slime filled rooms and bulkheads of the ships. Well ex-ship to be exact.

Part strategy you have to decide how to allocate time to produce results that will satisfy the demands of the Press and your financial backers. The game also features some spectacular visual effects as you search the ship hull in the dim light, and some adventure style logical puzzles as you try to figure out by associating objects with rooms how to get through some of the locked ships doors.

Titanic **is due in late July and will retail for £9.99.**

EMPIRE IN THE ASTEROIDS

A whole new world awaits those brave enough to fly Firebird's Empire **— a strategic game which looks like a cross between** Asteroids **and** Elite.

From all accounts Empire **is a massive game which takes some getting in to. However, the more you play, the more complex it becomes, and the more igenious you will have to be in your tactics.**

You control a spacecraft trading between the many planets and starbases of a solar system. Minerals, ore and people can be found on the planets, accessed through warp holes, and these can be used as commodities to trade with the starbases. Finding them can be tricky — negotiate the funnel-like warp hole, land on the planet to pick up the commodities you find.

Other than trading with the starbases, you can leave certain pods in their safe keeping or be sent on special missions to the outer reaches ot the galaxy.

There are numerous controls and pointers to watch. Each feature, like docking or trading, requires different instructions and skills. When one system has been exhausted you can travel through an asteriod belt to another. But that's not all. As you travel through the game, you'll be able to take over star systems and eventually form your own empire — but even then you must build a protective grid to guard your newly acquired territory.

Empire will be out soon at £9.95.

and COMPUTER SPARES

SCOOP

PURCHASE OF SURPLUS STOCK!

CANCELLED EXPORT ORDER

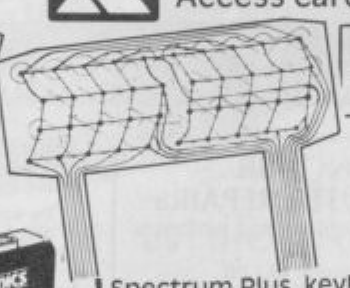
Due to a cancelled export order, we now have available a large selection of components at a special price for the Spectrum computer direct to the public.
Due to unlimited space we are not able to show all our spares available, so please call us and we will happily give you the current price on all your spares for the Spectrum/Commodore range. We also have some spares available for the ZX81.

SPARES FROM OUR D.I.Y. SECTION

WHY NOT PURCHASE THE SPARES FOR YOUR COMPUTERS FROM US. THE ONLY MAIL ORDER COMPANY SELLING SPARES.

ACCESS WELCOME

Same day delivery service on receipt of orders. You can order by Access card or call at our Reception to collect.

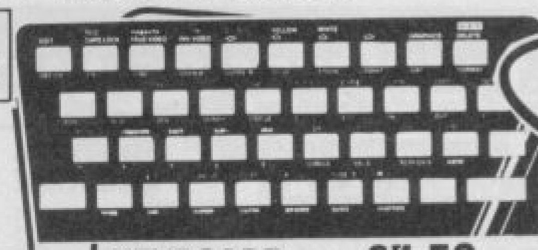


KEYBOARD MEMBRANES

Spectrum keyboard membranes **£5.50** plus £1.50 p & p

Spectrum Plus keyboard membranes **£12.90** plus £1.50 p & p

ZX 81 membranes **£5.00** plus £1.50 p & p



ORDER NOW!

KEYBOARD TEMPLATES **£5.50** plus £1.50 p & p

TRADE REPAIRS most welcome



NEW

SPECIAL OFFER!

Gun Shot II Rapid Fire Joystick and Interface complete outfit. Normal recommended retail price £19.95. if purchased together. **Special offer** of only **£16.50** including p & p

Joystick available as separate item **£10.95** plus Interface available as separate item **£9.00** plus £1.50 p & p.

ZX81 SPARES NOW IN STOCK

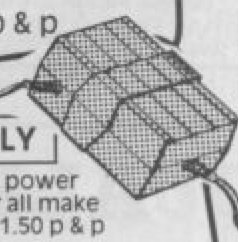


EXTENSION RIBBON

56 Way ribbon cable to extend your ports for your peripherals **£10.95** plus £1.50 p & p

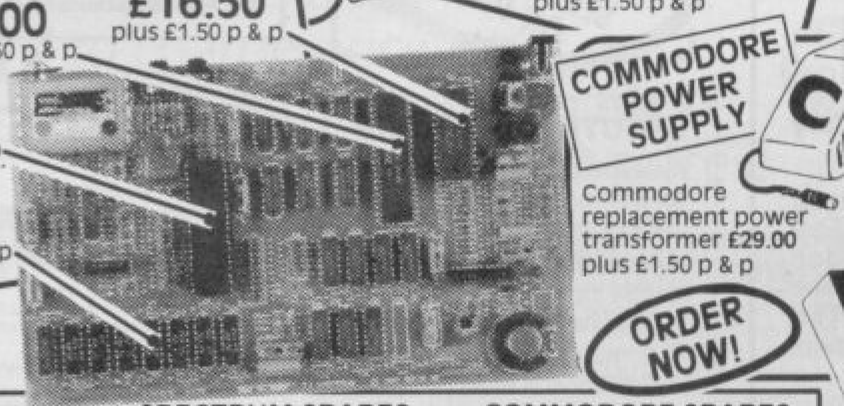


RUBBER MAT **£6.50** plus £1.50 p & p



POWER SUPPLY

Spectrum replacement power transformer suitable for all make of computer **£9.95** plus £1.50 p & p

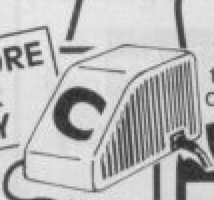


Z80B CPU **£3.00** plus £1.50 p & p

Rom **£16.50** plus £1.50 p & p

ULA **£16.50** plus £1.50 p & p

4116 rams **£1.00** plus £1.50 p & p



COMMODORE POWER SUPPLY

Commodore replacement power transformer **£29.00** plus £1.50 p & p

ORDER NOW!

SPECIAL OFFER!

Why not upgrade your ordinary Spectrum into the fantastic DK'Tronics typewriter keyboard for only **£31.50** including fitting, VAT and return post and packing.
Normal recommended retail price £49.95. Replacement printed DK'Tronics key sets **£7.50** including post & packing.



VideoVault D.I.Y. CORNER

We regret we cannot show all the components available. Just give us a call and we can quote you over the phone, delivery by 1st class post.

SPECTRUM SPARES	
Z80B CPU	3.00
4116 Rams	1.00
ZTX 650	0.60
ZTX 213	0.60
Power Supply Transformers	9.95
ULA 6C001	16.50
Rom	16.50
Keyboard membrane Spectrum	5.50
Keyboard membrane Spectrum Plus	12.90
Metal Templates	5.50
Keyboard Mats	6.50
ZX81 membrane	5.00

Spectrum Service Manuals only £30.00 including Spectrum + model

COMMODORE SPARES	
6526 – C.I.A.	23.00
6510 – Processor	23.00
6581 – Sid Chip	23.00
906114 – House Keeper	23.00
901225 – Graphic Room	23.00
901226 – Basic Rom	23.00
901227 – Kernal Rom	23.00
6569 – VIC	23.00
4164 Rams – Memory	3.00
Power Supply Transformers	29.00

All our prices include VAT, but please add £1.50 on each order to cover post, packing and handling charges.

SPECIAL OFFER!

Why not upgrade your 16K Spectrum to a 48K for as little as **£17.95** including VAT, post and packing. If you would like us to fit the kit for you, just send us **£19.95** which is a fully inclusive price to cover all costs including return postage.
Full fitting instructions supplied with every kit.
Issue 2 and 3 only.



VIDEOVAULT HEALTH WARNING!!!
Sending your computer to any other Repair Centre can seriously Damage its Health

FULLY REPAIRED AND TESTED ON MOST ADVANCED TEST EQUIPMENT IN EUROPE!

VideoVault Ltd

140 High St. West, Glossop, Derbyshire, England
Telephone: Glossop (STD 04574) 66555/67761

SPECIAL OFFER

5 GREAT FREE GAMES
NORMAL RECOMMENDED RETAIL PRICE **£33.00**
YOURS FREE WITH EVERY SPECTRUM REPAIR

sinclair supermart

TO ADVERTISE IN THE SUPERMART CALL SINCLAIR USER ON 01-251 6222

SPECTRUM 48K/+

STARSOFT — **EXPORTS WELCOME**

Kirel	6.65			Arc of Yesod	7.25
Batman	5.75	Turbo Esprit	6.55	Show Jumping	7.25
Starstrike II	5.80	The Comet Game	5.75	Movie	5.75
V	5.75	Green Beret	5.75	Yabba Dabba Doo	5.90
Quazatron	6.55	Who Dares Wins II	5.75	Westbank	5.75
Alien Highway	5.90	Quest Probe 3	7.30	2112AD	5.75
Heavy on the Magick	7.30	Popeye	5.20	Hypersports	5.80
Max Headroom	7.25	Hocus Focus	6.80	Ballblazer	5.90
Ping Pong	5.75	Superbowl	7.25	Blade Runner	6.60
Legend Amazon Women	5.85	Twister	5.40	Worm in Paradise	7.30
Bounder	5.75	Computer Hits 2	7.45	Forbidden Planet	5.80
Bounces	7.25	Sai Combat	5.10	Crash Smashes	7.35
Way of the Tiger	7.30	ID	5.75	Lord of the Rings	11.70
Rock 'n' Wrestle	6.60	Bomb Jack	5.75	Neverending Story	7.30
Cyberun	7.35	Mugsy Revenge	6.55	Battle of the Planets	7.25
Swords and Sorcery	7.30	Treasure Hunt	7.40	Yie Ar Kung Fu	5.75
The Price of Magic	7.30	Fighting Warrior	5.80	Redhawk	6.55
Core	7.30	Falkland's 82	5.80	Spitfire 40	7.45
Spindizzy	7.45	30 Games	7.30	Tomahawk	7.25
The Young Ones	5.80	They Sold Million II	7.30	Elite	11.00

UK orders, free P&P using fast 1st class post. Overseas add 70p per tape.
Send cheques, bank drafts to:

STARSOFT (Dept SU) 2c WALNUT ROAD, THORNE, DONCASTER DN8 4HW. Tel: 0405 816970

SINCLAIR COMPUTER REPAIRS

All machines dispatched within 72 hours of receipt

Spectrum: £17.00
ZX-81: £12.50
Spectrum 16-48K Upgrade: £25.00
(includes parts, VAT, and return postage)

For a fast and reliable service, send machine, brief description of fault and cheque or postal order to the experts:

CAPITAL COMPUTER SERVICES
Unit K2, Cardiff Workshops, Lewis Road, East Mourts, Cardiff CF1 461 5EG
Tel: (0222) 461801

HINTS · POKES · MAPS

"Stunning value" — Tony Bridge, Popular Computing Weekly

The monthly handbooks packed with tips, pokes, hints, maps, solutions, gossip, latest reviews, competitions and much more

ADVENTURERS HANDBOOK (CBM/Spec) £1.00
SPECTRUM ARCADE HANDBOOK (48/128) £1.00

or for even better value take advantage of our reduced subscription rates 3 issues £2.75; 6 issues £5.00; 12 issues £9.00. Send cheque or P.O to

H & D SERVICES (SU), 1338 ASHTON OLD ROAD HIGHER OPENSHAW MANCHESTER M11 1JG Tel 061 370 5666

FREE SPECTRUM REPAIRS?? SEE MANCOMP AD. ON PAGE 95

For Small Software Houses

CASSETTE DUPLICATION
50-1,000 load tested
Copyright holders only

SOUNDS GOOD
04946 (Beaconsfield) 5900

QUALITAS NEW!

At last, amazing NEAR-LETTER QUALITY on ordinary printers with Tasword!

● Equal-space justification ● Proportional character widths ● Underlining and emphasized characters ● Five business fonts supplied ● Font editor included ● Microdrive and disc compatible ● For Epson RX80 and compatibles with quad-density graphics ● Tasword Two version only **£7.95** (please state printer) or phone for print sample ● Tasword Three version out soon!

P.S. **TASPRO (£4.95)** and **TASPRO THREE (£5.95** or £3 upgrade from Taspro) give equal-space jusitification on daisywheels (and dot-matrix printers using their own fonts) with Tasword Two and Three. Please state printer and interface when ordering.

M-DOC

The essential Microdrive utility.

Have you precious files on a cartridge which still CAT but no longer load? M-Doc to the rescue!

● Find, load, repair and rewrite bad sectors, and hend load damaged files ● Full status reports pinpoint faults quickly ● Comprehensive sector editing ● Full printer support of screen displays ● "Filter data" option for text files, eg Tasword ● Separate program makes corrupted BASIC programs editable ● Only **£6.95**

All Spectrums except 16K. Selected programs available from good computer shops and Micronet 800. Also via fast mail order (UK postfree, Europe add £1, elsewhere add £2 airmail) with 14-day "full refund if not entirely satisfied" guarantee (statutory rights unaffected). Trade enquiries welcome: phone R&R Distribution on 0977 795544. Other titles available include **MODER-80**, on handy monitor/disassembler **(£5.95**; and **GENER-80**, an ultrafast, full-screen editor/assembler **(£7.95)**.

SEVEN STARS **Seven Stars Publishing, Dept SU, 34 Squirrel Rise, Marlow, Bucks SL7 3PN. Tel: 06284 3445**

SPECTRUM REPAIRS

We expertly repair Spectrums for £17 inclusive of parts and labour and return postage.

Spectrums upgraded to 48K for £34 inc. P&P. All keyboard faults cost only £12.

RA ELECTRONICS
133 London Road South
Lowestoft, Suffolk
Tel: (0502) 66289

SCOREBOARD

All the thrills of a five match test series. Choose the countries and players. Features include, all batsmen displayed with their scores, named bowlers with full bowling analysis, follow-ons, declarations, runs required, man of the match/series, etc. etc.

NAT WEST TROPHY

Involving all the 17 counties. Where applicable, all the features of Scoreboard are included, plus run rate required of team batting second and man of the match Gold Award.

Both programs on one cassette for 48K Spectrum. **£5.00**

CROSSWORD COMPILER

Very addictive program for designing and compiling your own crosswords. Commit the grid and answers to tape or printer. 48K Spectrum. **£5.00**

Prices include post and packaging.

BYRON SOFTWARE, (Dept SU)
57 Rangoon Road, Solihull, West Midlands, B92 9DD.

FREEPOST
SPECTRUM REPAIRS

GUARANTEED SIX MONTHS

We have been maintaining all types of computer systems from mainframes to micros for over 15 years and offer you:

- Full overhaul and update with each repair.
- Six month warranty on *whole* computer – not only on repair.
- FREEPOST – We pay the postage both ways (UK).
- Returned to you by 1st class post. Fully insured.
- All inclusive prices for any fault £20.

MP ELECTRONICS, FREEPOST, DEPT SU, DEREHAM, NORFOLK NR19 2BR3
TEL: 036287 327

SCOTLAND'S No. 1

For home and personal computer repairs
Specially fast Spectrum service!

- ★ *Same day for most faults*
- ★ *1 hour if delivered personally*
- ★ *Free estimates*
- ★ *Upgrades. Membranes and P.S.U.'s*
- ★ *3 month warranty on work done*

MICRO-SERV

Dept SU, 95 Deerdykes View, West Field Ind. Area, Cumbernauld
Tel: (0236) 737110

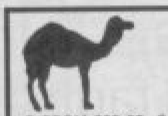
Trade, schools and club discount given

SPECTRUM REPAIRS

Spectrum repairs £18.95 including parts insurance and P/P.

Send your computer with cheque or PO for £18.95 and description of the fault to:

SUREDATA (SU)
45 Wychwood Avenue, Edgware, Middlesex.
Tel: 01-951 0124



ADVERTISEMENT INDEX

Sinclair User in August

August? Who reads computer magazines in August? But wait, just because you are jetting off to sweaty foreign climes it doesn't mean you can do without next month's sublime copy of Sinclair User.

What about when you are stranded at Gatwick for 37 hours or unseasonal monsoons rip through your Spanish holiday resort — forcing you to remain in your hotel bedroom with only the hungry mosquitoes for company?

Just as well you remembered to buy the August copy of Sinclair User and stash it securely in your rucksack.

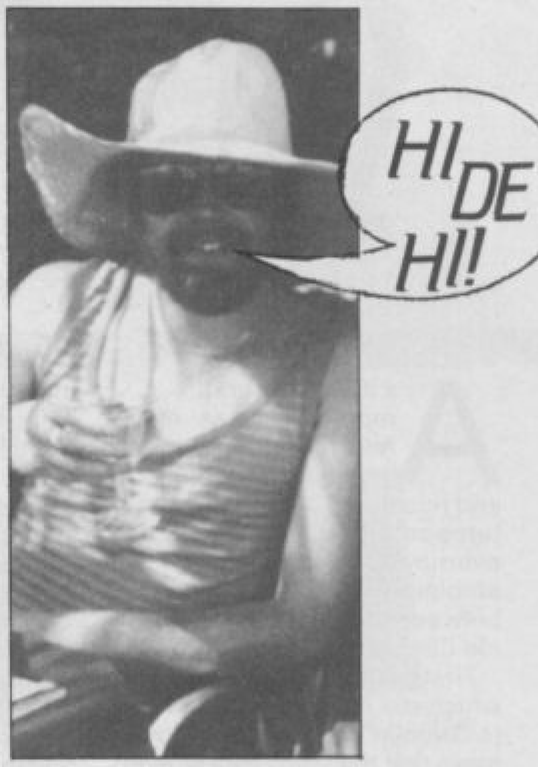
While away those nightmarish holiday days with our guide to cheap printers (under £175) and interfaces.

Refuse to visit the holiday disco and instead come with us to the wonderful world of £1.99 software, awesome and aweful, we name names.

Resist the hotel band's rendition of 'Viva Espana' and read more about the music which you and your Spectrum can make when you connect it up to the wonderful (and quite cheap) Casio CZ101.

We will probably review the odd software and hardware package, possibly even on an exclusive basis, and you can confidently anticipate a couple of competitions with more prizes than there are hours in an editorial lunch.

And who knows what other featured goodies the next four weeks will throw up . . . Which brings us back to foreign holidays . . .



And here's our very own 'mad Celt' slumming it in Torremolinos.

August Sinclair User. Landing in the shops July 18.

Gremlin

As the weeks and months leave never to return Gremlin is increasingly confused and misplaced. Every time he turns around some new stone is overturned and a further ambiguity in the 'agreement' between Lord Saccharin and old Clive crawls out.

First the Microdrive situation, which still hasn't been resolved to Gremlin's satisfaction. Now news that the Lord himself, who claimed 'world rights' to the pregnant calculator, ommited to include Portugal and the whole of Eastern Europe — in short a very sizeable chunk of the globe. He will presumably not dare venture far from Brentwood for fear of falling off the edge of his world.

Weird goings on up at Cambridge too. Sir Clive scraping together a few bob through what amounts to a C5 boot sale over at Milton Hall disposing of carpets, chairs and the like, while so many of the more useful bits and bobs have gone walkabout. Gremlin hears Clive has offered an amnesty against offenders in the hope of getting some of it back.

GOSH — a dog's life

Industry pundits may tell you Mikro-Gen has been going to the dogs ever since the big bust-up months ago over **Shadow of the Unicorn**.

Mike 'Wally' Meek has never been one to heed the words of pundits before, as Gremlin has cause to remember, but it seems everything's got too much.

Mike's latest wheeze is to do a game about a dog, the Mikro-Gen Pet of the Year, no less.

This little-known cheque for a hundred quid was awarded to the owner of Peggy, a shaggy mutt who saved her family from being burnt alive by a rabid electric duvet.

The heroic tale was recounted in *The Times*, where Mike announced his intention of creating a computer game about the marvellous hound. "Well, we will if we can," hesitates Mike. "We'll take a look at it and see what we can do."

Since then, Meek has resigned his post at GOSH after failing to inspire more than six people to turn up to meetings, and acquired a stomach ulcer to boot. This is said to be due to the strain of trying to look dynamic at GOSH and Mikro-Gen at the same time. Gremlin just hopes the dog had nothing to do with it . . .

Scooby who?

Talking of dogs, the sorry saga of the malfunctioning Tardis continues with the latest news from Micro Power. The failure of the good Doctor to materialise in the Spectrum galaxy has already won the threatened game a Scooby nomination, but the latest news deserves the full award.

Although **Dr Who** was supposed to be arriving around Christmas, so far only BBC and Commode versions have been released. Now news comes of a third **Dr Who** game — for the Amstrad, with a Spectrum version to follow 'soon'. Soon after the other two, Gremlin supposes this means.

Micropower says the game should do well on the Amstrad as "it's had a lot of coverage." To judge from the amount written about the alleged product in the Spectrum press is should be a best-seller there too. But somehow Gremlin doubts it . . .



Turkey Kiev

Gremlin generates so much noxious radiation of his own that the extra cloud or two wafting over the cistern makes little difference. But when Alligata attempts to lob full-scale nuclear disasters into the mouth of the cavern it's time to call a halt.

Meltdown — on the Amstrad now and the Spectrum in the autumn — is as repulsive a concept as Gremlin can imagine. The ad shows a nuclear reactor about to go haywire and points out the 'explosive' and 'topical' nature of the game. One can only hope the fall-out blows right back in Alligata's face.

Meanwhile the reptillian software firm is bringing out a compendium of small programs called **Pub Games**. Gremlin reckons the idea of a game you have to be dead drunk to enjoy has probably been tried before. Alas, Alligata omitted to include that current favourite among pub people, in which the player tries to persuade a group of drunken software writers that there's nothing funny about Chernobyl.

Burning question

Does Tony Crowther's hair really glow in the dark or is it just PR?

How to look cheap

Gremlin is delighted to announce the resurrection of Artic, that much-maligned purveyor of increasingly time warped product whom everybody thought had gone bust years ago. Not so, and Artic wins the Brazen Backslappers of the Month Award by the way it chooses to prove it.

Artic, which once tried to make a press release out of a dead cat, has announced it's ready to become the Number One budget software house, brushing aside such triffles as all those Mastertronic titles which jam up the budget charts clear back to sixty-six.

How? Simple! New designs on the cassette covers to make the games 'look different'. This remarkable wheeze has hitherto been overlooked by the industry, and consists of using white labels with simple pictures of Chinese woks or walls on them, depending on whether the game is called **Woks** or **The Great Wall**. Barely a word is written in praise of the games — all is staked on the cassette labels.

Gremlin's got news for Artic. Firebird is trying hard for that elusive No1 slot too — with re-releases of old oldies like **The Wild Bunch** with — yup — equally wonderful new cassette inserts. Competition against which Mastertronic with games like **Knight Tyme** doesn't stand a chance . . .

New releases

Gremlin is delighted to welcome the long-awaited replacement for Chris 'lunchbreaks' Bourne, in the shape of Graham Taylor. Nobody is prepared for Taylor's entrance except David 'Sorry about that' Kelly, who used to work with him on *Popular Computing Weekly* in 'the old days'.

The shock of seeing Graham's suspiciously meaningful tie and grey suit clearly phased the old *User* hacks, who simply assumed that Louise 'WPC' Fanthorpe was having another purge of the ad team and this was Monday's replacement.



An Italian software house hits on a novel way of packaging games when it hasn't decided which games to pirate yet. The name gets typed in the bubble. Some FAST sorting out needed there?

Dirty movie

The dreadful duo that is Domark can always be relied upon to produce the most revolting concepts of any software season. In fact, when one thinks of the ideas that must have been rejected by these two degenerates it's appalling.

For once, Gremlin can think of nothing more to say . . .

Now the sweetly innocent duo have had to climb down over **Splitting Images.**

It seems some TV company thinks the whole thing is designed to make you think that Mark and Dom-Dom's latest is connected with *Spitting Image* and game is now to be known as **Split Personalities.**

Shed not a tear, the terrible twins have already shipped out enough copies of the game with the old name to buy the computer game rights to all of Jeffery Archer's novels several tims over.

OUT OF THIS WORLD!

SAGA SYSTEMS' HARDWARE

If you want the best for your Spectrum, ensuring it advances with technology, the Saga Systems' collection of keyboards and peripherals is essential. And they are all compatible with the 48K, + and 128K Spectrum.







SAGA 1 EMPEROR

"... Good looks ... works remarkably well ..." – Sinclair User.
"... remarkable ... value for money ..." – Sinclair User Annual 1985.
"... particularly like the extra caps and symbol shift keys ... brought the computer to life in quite an unexpected way ..." – Primary Teaching and Micros.

PRICE £39.95 *(Inc. VAT).*

THE NEW SAGA 2 +

"If I had not already seen the Saga 3 Elite I would have awarded the 2+ a Sinclair User Classic. As it is I'll simply say "Well done, Saga"". – Sinclair User.
And the price is only **£54.95** *(Inc. VAT).*

THE SAGA 3 ELITE

"Devastatingly smart ... the opposition look like toys ... the best." – Popular Computing Weekly.
"It transforms the humble Spectrum" – Sinclair User.
"... will release the full potential of your Speccy ... superdooper ..." – Your Sinclair.
The Last Word software is available with it free
At its new low price of **£69.95** *(Inc. VAT) the Saga 3, with its own number pad, is also ideal for the 128K Spectrum.*

SINCLAIR USER CLASSIC AWARD

NEW 2001



THE NEW SAGA 2001

With its infra-red remote transmission, the Saga 2001 can be used while you walk around the room. No wires link it to the Spectrum. It has 101 keys. The Last Word software is available with it free, and it is simply out of this world.

PRICE £119.95 *(Inc. VAT).*



THE SAGA LO PROFILE

With large enter key, full sized spacebar and printed keys, it has got to be good at **£39.95** *(Inc. VAT).*

SAGA SYSTEMS' PERIPHERALS



Microdrive extension cable. For use with your Saga 3.
£4.95 *(Inc. VAT).*
Sound Boost. To put music in your ears (and television).
£9.95 *(Inc. VAT).*
Flexicable enables you to drive two interfaces.
£11.95 *(Inc. VAT).*
Dust cover. To keep your computer and Saga keyboard clean. **£4.95** *(Inc. VAT).*
Centronics Interface. To drive your printer. **£34.95** *(Inc. VAT).*

SAGA SYSTEMS' SOFTWARE

If you want to do more than just play games and require serious software with practical applications, then we have "The Last Word".

THE LAST WORD

We believe The Last Word is the most advanced word processing package for the Spectrum. Just look at these outstanding facilities:- Standard commercial 80 characters on screen, over 60 commands, massive range of printer options, full on-screen help facility, full feature expression evaluator/calculator, over 24K text space in memory, compatible with tape and microdrive, wafer and: KDOS, BETA, Gordon and Opus disc systems.

FREE WITH THE SAGA 2001 and THE SAGA 3 ELITE

PRICE: £13.95 *inclusive of VAT*
Send off now for full catalogue.

SAGA SYSTEMS' PRINTERS



THE NEW SAGA GLP (Great Little Printer)

Only **£199.95,** *the Saga GLP is a dot matrix printer with a near letter quality mode, a complete Epson character set, tractor and friction feed, and a centronics and RS232 interface. It is very compact and can print up to 100 c.p.s.*
"... The GLP ... has a lot to recommend it ..." – Sinclair User
only **£199.95** *(Inc. VAT).*



THE CITIZEN 120D

A precision dot matrix printer with a 2 year warranty, the Citizen 120D operates at 120 c.p.s. in fast draft, or 25 c.p.s. in N.L.Q. It has Epson compatible graphics, tractor and friction feed as standard, an optional cut sheet feeder and is very compact. Further features include proportional spacing with many type styles and an exceptional 4K printer buffer.
"... The 120D is an excellent printer ..." – Sinclair User
only **£235.00** *(Inc. VAT).*



THE NEW SAGA DX85

Big and robust the DX85 is a heavy duty dot matrix printer which is made in the U.K. It prints at 120 c.p.s. It has a bi-directional logic seeking print head and centronics interface (RS 232 available). It has a draft quality mode and costs only **£199.95** *(Inc. VAT).*



THE LTR1 PRINTER

The LTR1 is a 12 c.p.s. letter quality printer with RS232 and centronics port built in. The LTR1 prints in ink on standard paper and requires an interface to work. The LTR1 is only **£139.95** *(including VAT)*

Send off now for full catalogue.

	Quantity	Price	P&P	
SAGA 1 EMPEROR *	☐	£39.95	£1.50	______
SAGA 2+ *	☐	£54.95	£1.50	______
SAGA 3 Elite *	☐	£69.95	£1.85	______
SAGA 2001 *	☐	£119.95	Free	______
SAGA LO PROFILE *	☐	£39.95	£1.50	______
128K Keyboard up-grade kit *	☐	£4.99	Free	______
LTR1 PRINTER	☐	£139.95	Free	______
CITIZEN 120D	☐	£235.00	Free	______
THE SAGA DX85	☐	£199.95	Free	______
SAGA GLP	☐	£199.95	Free	______
MICRODRIVE EXT. CABLE	☐	£4.95	Free	______
SOUND BOOST	☐	£9.95	Free	______
FLEXICABLE	☐	£11.95	Free	______
DUST COVER (Please specify which keyboard)	☐	£4.95	Free	______
CENTRONICS INTERFACE	☐	£34.95	Free	______
THE LAST WORD	☐	£13.95	Free	______
VAT is included				
Please state Spectrum model: 48K, +, 128K (please circle) *	TOTAL			______

SEND YOUR ORDER TO: Dept. SU1 Order Desk Saga Systems Ltd., 2 Eve Road, Woking, Surrey GU21 4JT. Telephone: 04862-22977

Mr/Mrs/Miss ______________________

Address ______________________

______________________ Amount enclosed £ ______

My Access Card No. is ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

ACCESS ONLY ACCEPTED

Please tick method of payment: PO ☐ Cheque ☐ Draft ☐ Access ☐
If this is confirmation of telephone order, please tick box ☐

Signature ______________ Date ______

Overseas orders, please deduct 15% VAT add £4 for postage excess.
Please allow 28 days for delivery.

Callers welcome at our shop

ADVANCE WITH

Saga Systems Limited

TEL: 04862-22977